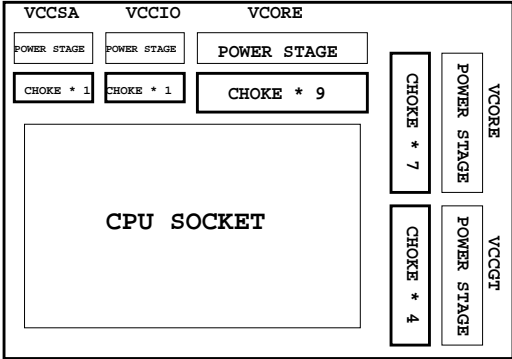


Model Name: GA-Z170X-Gaming G1

Rev 1.0

SHEET	TITLE	SHEET	TITLE
01	COVER SHEET	35	DUAL USB30_LAN-E2201
02	BOM & PCB MODIFY HISTORY	36	MODEL NAME LED
03	BLOCK DIAGRAM	37	IT8951
04	LGA1151_A	38	IT8792
05	LGA1151_B-DDR4	39	FAN CTRL--SIO_8792
06	LGA1151_C	40	Dual BIOS
07	LGA1151_D	41	PEX8747S UPSTREAM & MISC
08	DDR4 CHANNEL A 1,2	42	PEX8747S DOWNSTREAM SLOTS
09	DDR4 CHANNEL B 1,2	43	PEX8747S STRAP & CPLD INTF
10	PCH CLOCK BUFFER	44	PEX8747S POWER
11	PCH DMI,USB,PCIE	45	PEX8747 POWER (SMD choke)
12	PCH MISC	46	PCI EXPRESS X16_1
13	PCH SATA,PCIE,SATA_EXPRESS	47	PCI EXPRESS X16 SWITCH_1
14	PCH PWR, GND	48	PCI EXPRESS X8_1
15	SATA EXPRESS 1	49	PCI EXPRESS X16_2
16	SATA EXPRESS 2	50	PCI EXPRESS X16 SWITCH_2
17	ASM1184	51	PCI EXPRESS X8_2
18	PCIE X1 slot * 3	52	FP,BZ,TPM
19	Creative Sound3Di	53	D720210 4port Hub-Rear
20	I2S , REAR DAC	54	D720210 4port Hub (Power)
21	Audio Amp	55	D720210 4p Hub2_Front
22	Audio Power	56	D720210 4p Hub2 (Power)
23	AUDIO Connect	57	F_USB30
24	ALPINE RIDGE CIO & DP	58	F_USB BOX Header
25	ALPINE RIDGE POWER	59	USB_KB,USB DAC-UP
26	TBT TYPE C PORT A	60	IR3570 PWM
27	U3.1 Type A PORT B	61	IR3553-DDR MOS
28	TBT HDMI 2.0	62	IR3553-VPP MOS
29	RST, PWR, CLR_CMOS, 80 PORT	63	VCCPLL
30	IDT6V41530_CLK BUFFER	64	IR35201 PWM-VCORE
31	ATX POWER , HWM	65	IR3553_MOS_1-VCORE
32	ITE 8628 LPC IO	66	IR3553_MOS_2-VCORE
33	DUAL LAN-A~KILLER E2201	67	IR3553_MOS_3-VCORE
34	DUAL LAN-B~KILLER E2201	68	IR3553_MOS_4-VCORE

SHEET	TITLE
69	IR35201 PWM-VCCGT
70	IR3553_MOS_1-VCCGT
71	RT8120_PCH
72	IR3570 PWM
73	IR3553-VCCSA
74	IR3553-VCCIO
75	DISCRETE POWER1
76	NCT3933
77	R_USB30
78	M.2_B X4 / ASM106SE
79	M.2_B SWITCH
80	Asmedia ASM106SE
81	M2_WIFI
82	M.2_C X4 /SATA PORT4/5
83	M.2_C SWITCH
84	ASM1061
85	HDMI 20 MCDP2800-BA
86	TABLE LIST
87	EMI-ESD
88	
89	
90	

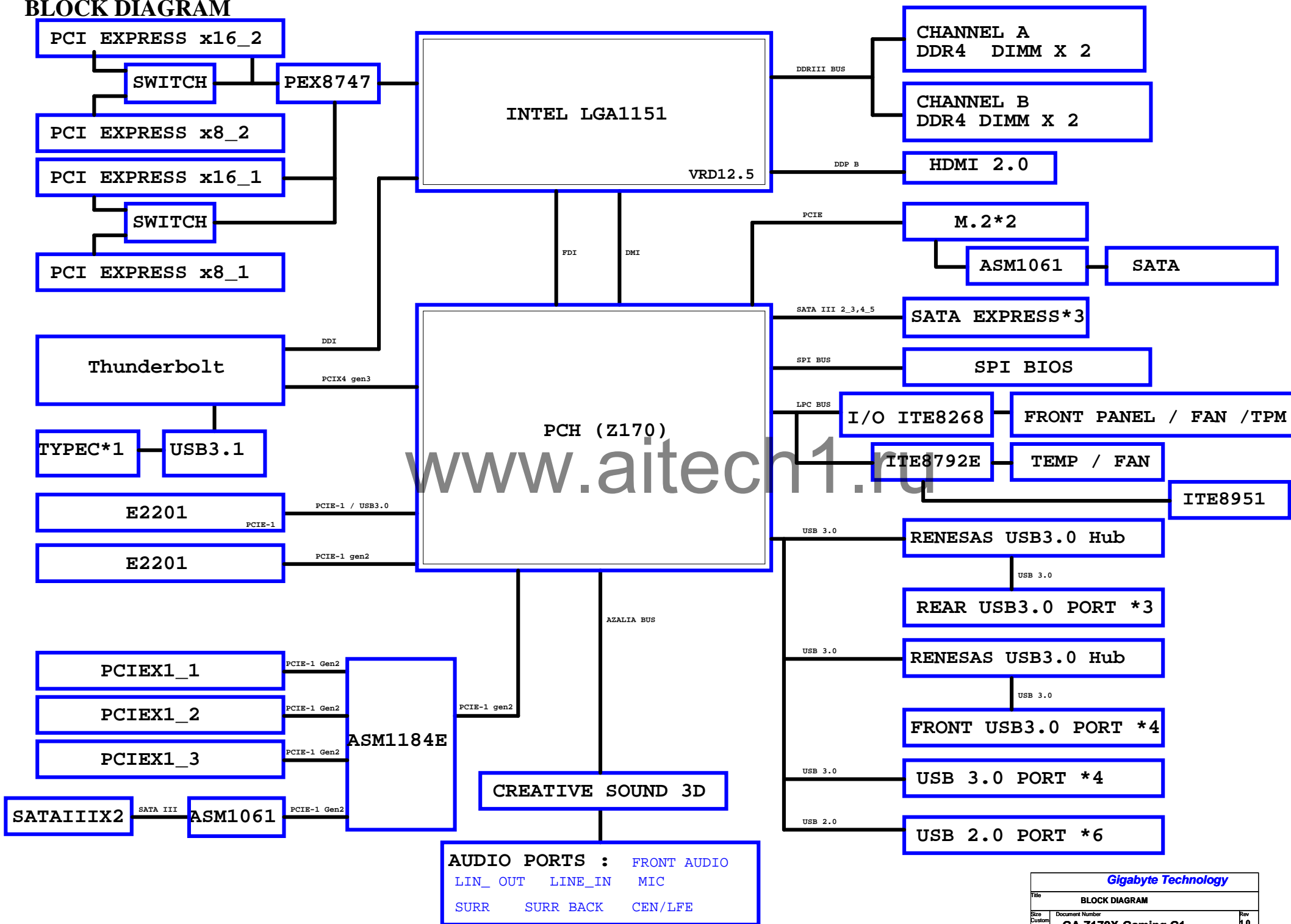


Component value change history

[illegible][illegible]

DATE	Change Item	Reason
2015/07/15 PCB:0.1	First Release ROM G1	
2015/03/10 PCB:0.2	1.SPCC ADD THUNDER BALL 2.ASM106SE 變更為106I 3.UPDATE I/O,POWER,ASM106I,PLX8747,AUDIO,DUAL BIOS,ERP,PCH,5VDUAL/3VDUAL等	
2015/05/15 PCB:0.2	1.FNR6 ,MR22 UPDATE FOOTPRINT,CHECK LAYOUT? 2.DEL HDMI DIODE 3.UPDATE THUNDERBOLT 模組 4.UPDATE 106I 模組	
2015/05/22 PCB:0.21	1.DIP DDR 改成SMD DDR	
2015/07/8 PCB:1.0	1.ADD TRN19,TRN7?不上件 2.ADD DFR4 pull B1 EVER,AND NACIO FOR DDVRPP POWER 3.MR22/MR23/TR115/DAA48/COR48 0 ohm---->short pad 4.ADD VC145 FOR P2A8747 POWER RIBBLE	

BLOCK DIAGRAM



Impedance=85 +- 15%

* 删除 WR17 , WR14 , WR10 ,

* 冊 WR91

CPU_VCCST_PWOK

```
* 删除 net N_CPU_VCCST_PWOK
```

A_TCK WR11 51/4/1
A_TRST WR9 51/4/1

NR1 0/6/X VCC:1 0 PCH

N_CPUPWROK WBC47 1n/4/X7R/50V/K

WBC123 1n4/X7R/50V/K

-CPURST

24.9/1 PEG_RCOMP I7		PEG_RCOMP	
15 < 400 mils			
A DMI_0RXN	Y3		
A DMI_0RXN	Y4	DMI_TXP[0]	AC2 A DMI_0TXP
		DMI_RXN[0]	AC1 A DMI_0TXN
A DMI_1RXN	AA4		
A DMI_1RXN	AA5	DMI_TXP[1]	AD3 A DMI_1TXP
		DMI_RXN[1]	AD2 A DMI_1TXN
A DMI_2RXN	AB4		
A DMI_2RXN	AB3	DMI_TXP[2]	AE2 A DMI_2TXP
		DMI_RXN[2]	AE1 A DMI_2TXN
A DMI_3RXN	AC4		
A DMI_3RXN	AC5	DMI_TXP[3]	AF2 A DMI_3TXP
		DMI_RXN[3]	AF3 A DMI_3TXN

```

PA_EXP_TXP[0..15]  >> PA_EXP_TXP[0..15]  41
PA_EXP_TXN[0..15]  >> PA_EXP_TXN[0..15]  41
PA_EXP_RXP[0..15]  >> PA_EXP_RXP[0..15]  41
PA_EXP_RXN[0..15]  >> PA_EXP_RXN[0..15]  41

```

```
6 layer PEG/DMI=====4/4/4//15
6 DSL layer PEG/DMI=====4/5.5/4//15
```

Impedance=85 +- 15%

```
CFG[2]:x16 Lane Numbering
Reversal. 1= NORMAL;0=reversal

CFG[4]: eDP
enable:1:disable/0=enable

CFG[6:5]:PCI Express* Bifurcation; 11=
1 x16 PCI Express;10=2x8 PCI Express

CFG[7]: PEG Training;1=(default) PEG Train
immediately following RESET#;0=PEG Wait for BIOS
```

```
CFG[2]:x16 Lane Numbering
Reversal. 1= NORMAL;0=reversal

CFG[4]: eDP
enable:1:disable/0=enable

CFG[6:5]:PCI Express* Bifurcation; 11=
1 x16 PCI Express;10=2x8 PCI Express

CFG[7]: PEG Training;1=(default) PEG Train
immediately following RESET#;0=PEG Wait for BIOS
```


* 改DDR4 net

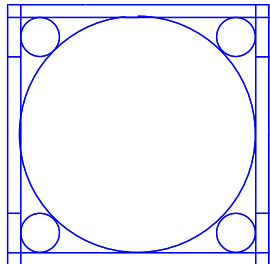


8 MDA_ECC[0..7] ↔ MDA_ECC[0..7]

DDR CHANNEL A

1 OF 12

CPU-SK/1151/S/15



LGA1151
ILM_BP/1156/CSP/12KRC-0F0001-61RJ
黑色cover

Need check the new CPU ME



9 MDB_ECC[0..7] ↔ MDB_ECC[0..7]

DDR CHANNEL B

2 OF 12

CPU-SK/1151/S/15

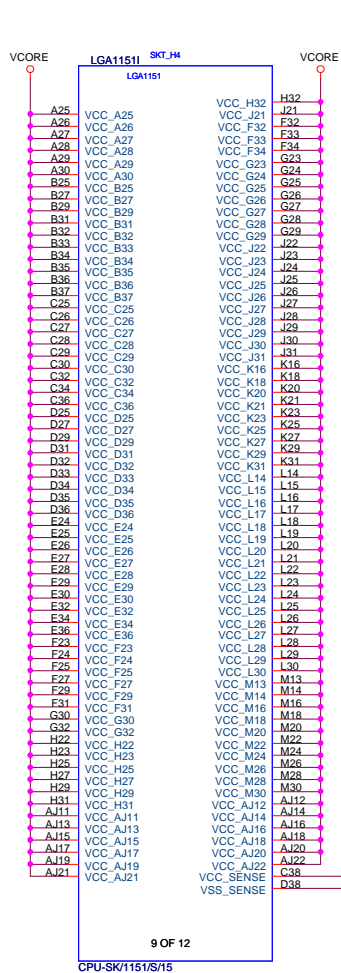
8 MDA[0..63] ↔ MDA[0..63]
9 MDB[0..63] ↔ MDB[0..63]

8 M_DQSA[0..7] ↔ M_DQSA[0..7]
8 M_DQSA[0..7] ↔ M_DQSA[0..7]

8 MAAA[0..16] ↔ MAAA[0..16]
9 MAAB[0..16] ↔ MAAB[0..16]

9 M_DQSB[0..7] ↔ M_DQSB[0..7]
9 M_DQSB[0..7] ↔ M_DQSB[0..7]

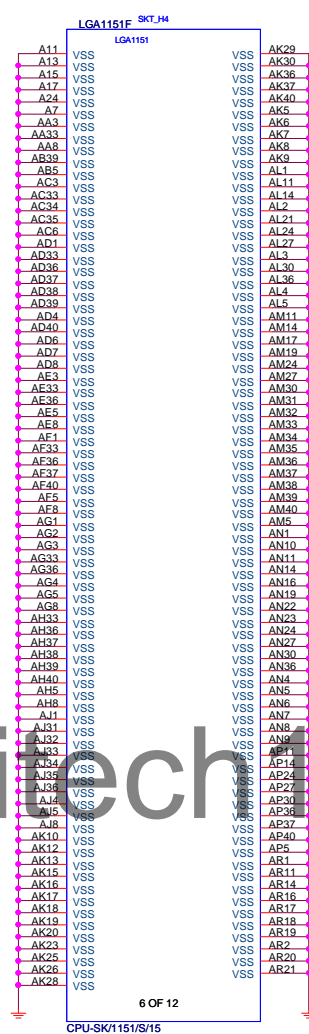
Gigabyte Technology		
CPU LGA1151-B		
Size	Document Number	Rev 1.0
Custom	GA-Z170X-Gaming G1	
Date:	Tuesday, July 14, 2015	Sheet 5 of 87

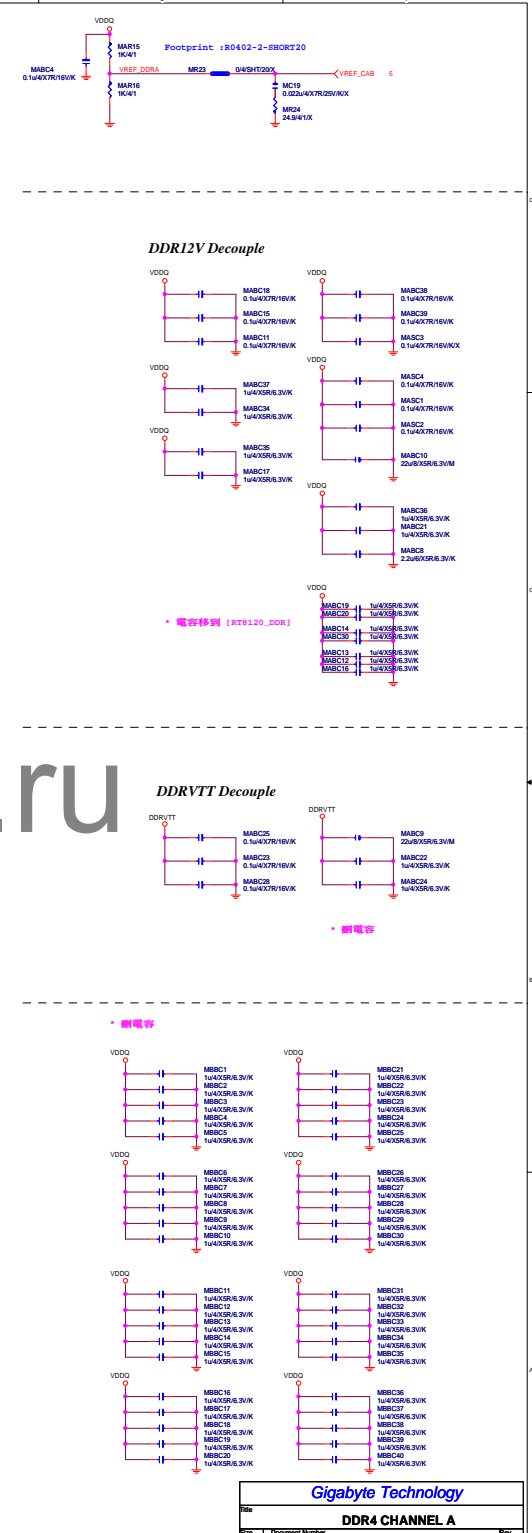


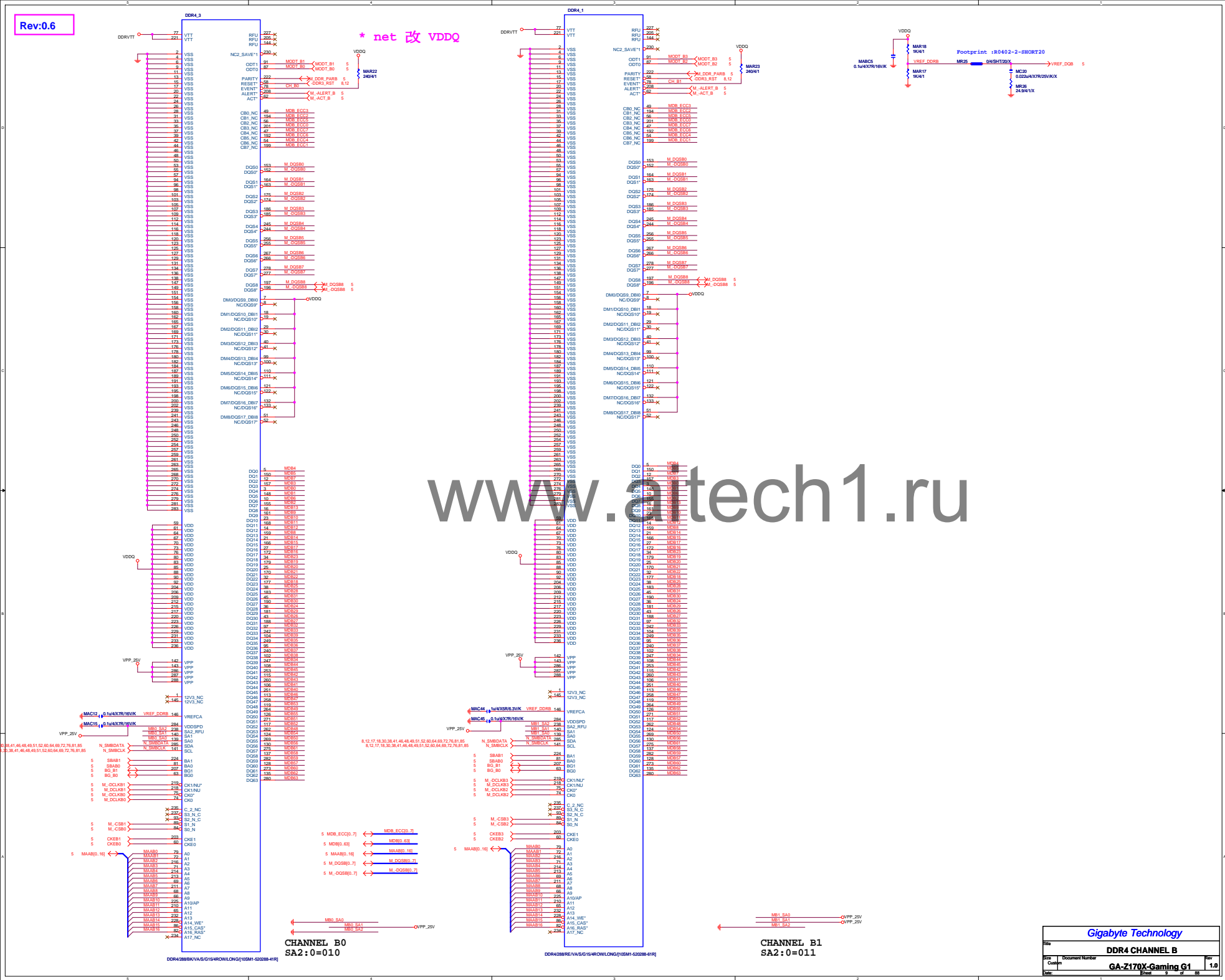
9 OF 12

CPU-SK/1151/S/15

VCCORE_VCC_SEN 64
VCCORE_VSS_SEN 64



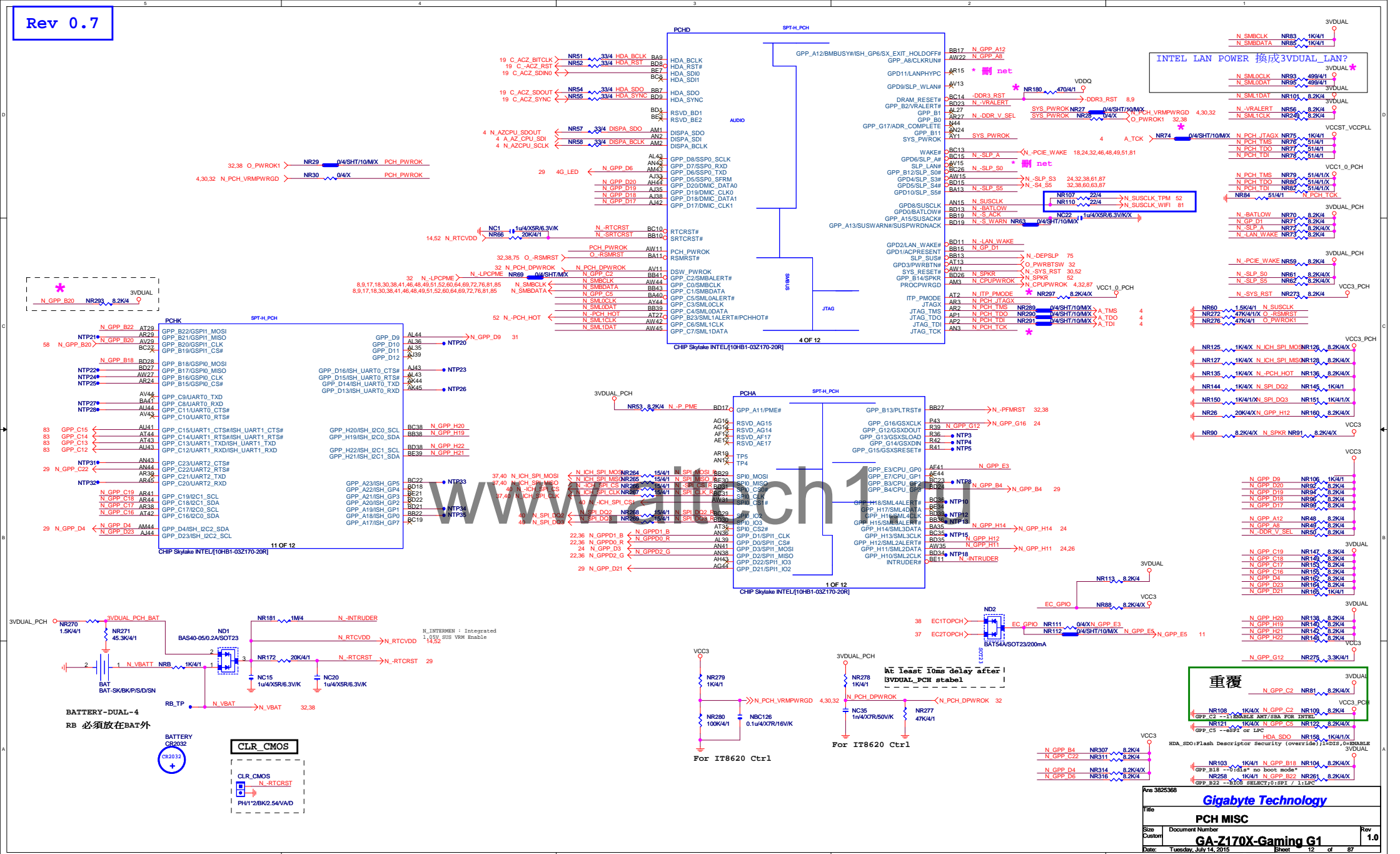






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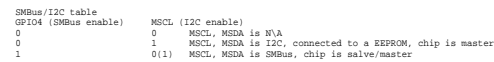
Ans 3825368			
Gigabyte Technology			
Title			
PCH DMI,USB,PCIE			
Size	Document Number		Rev
Custom	GA-Z170X-Gaming G1		1.0
Date:	Tuesday, July 14, 2015	Sheet 11 of 87	



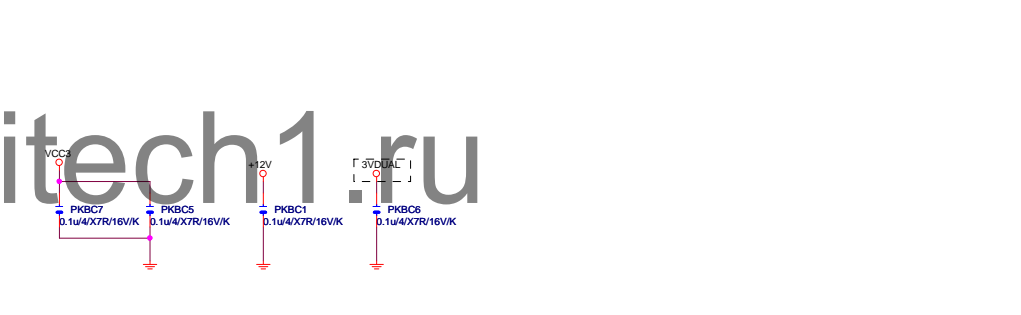
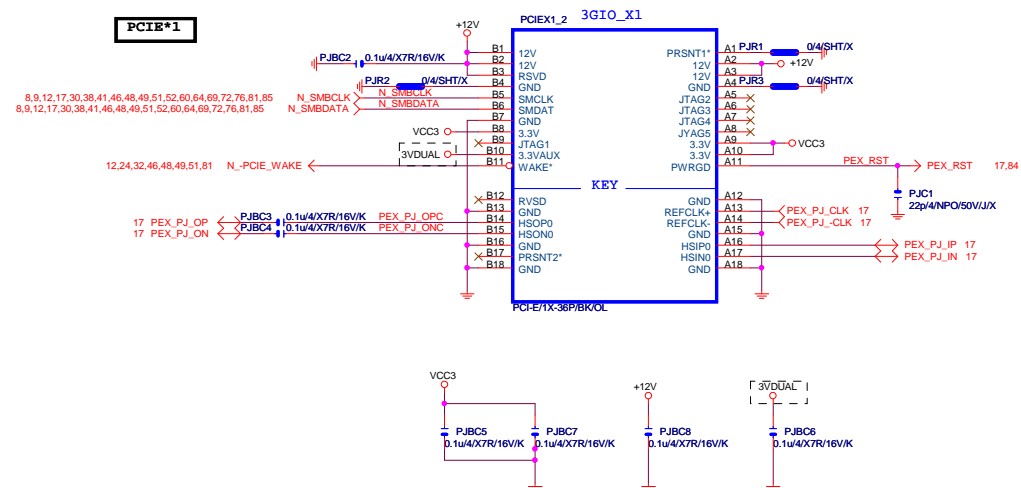


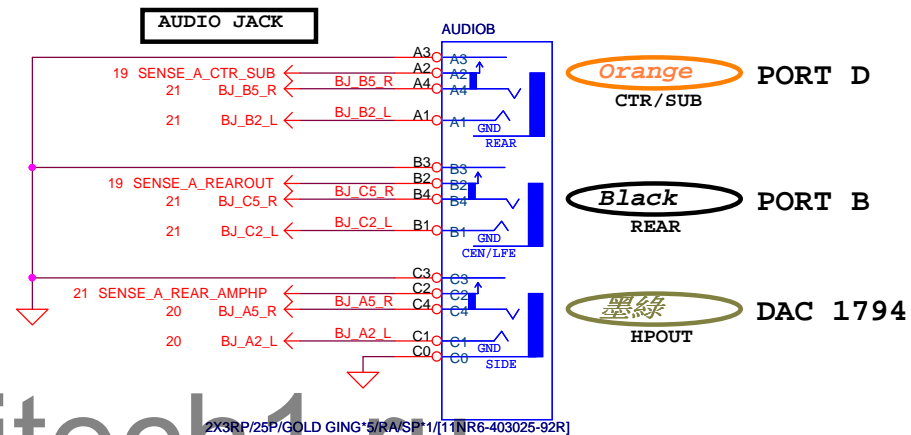
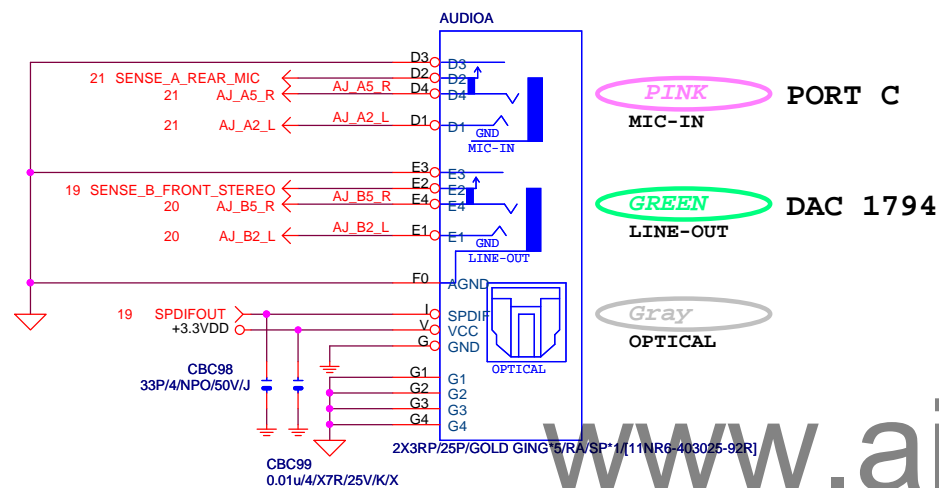
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- | |
|---------------------|
| SATA 5 (文字面寫SATA 1) |
| SATA 4 (文字面寫SATA 0) |
| SATA 3 |
| SATA 2 |
| SATA 1 (文字面寫SATA 5) |
| SATA 0 (文字面寫SATA 4) |



DEL YQ11/YQ12/YR126/YR128/YC165/YC166



**Gigabyte Technology**

Title

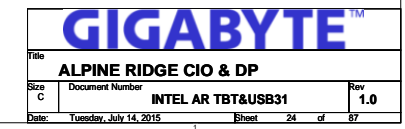
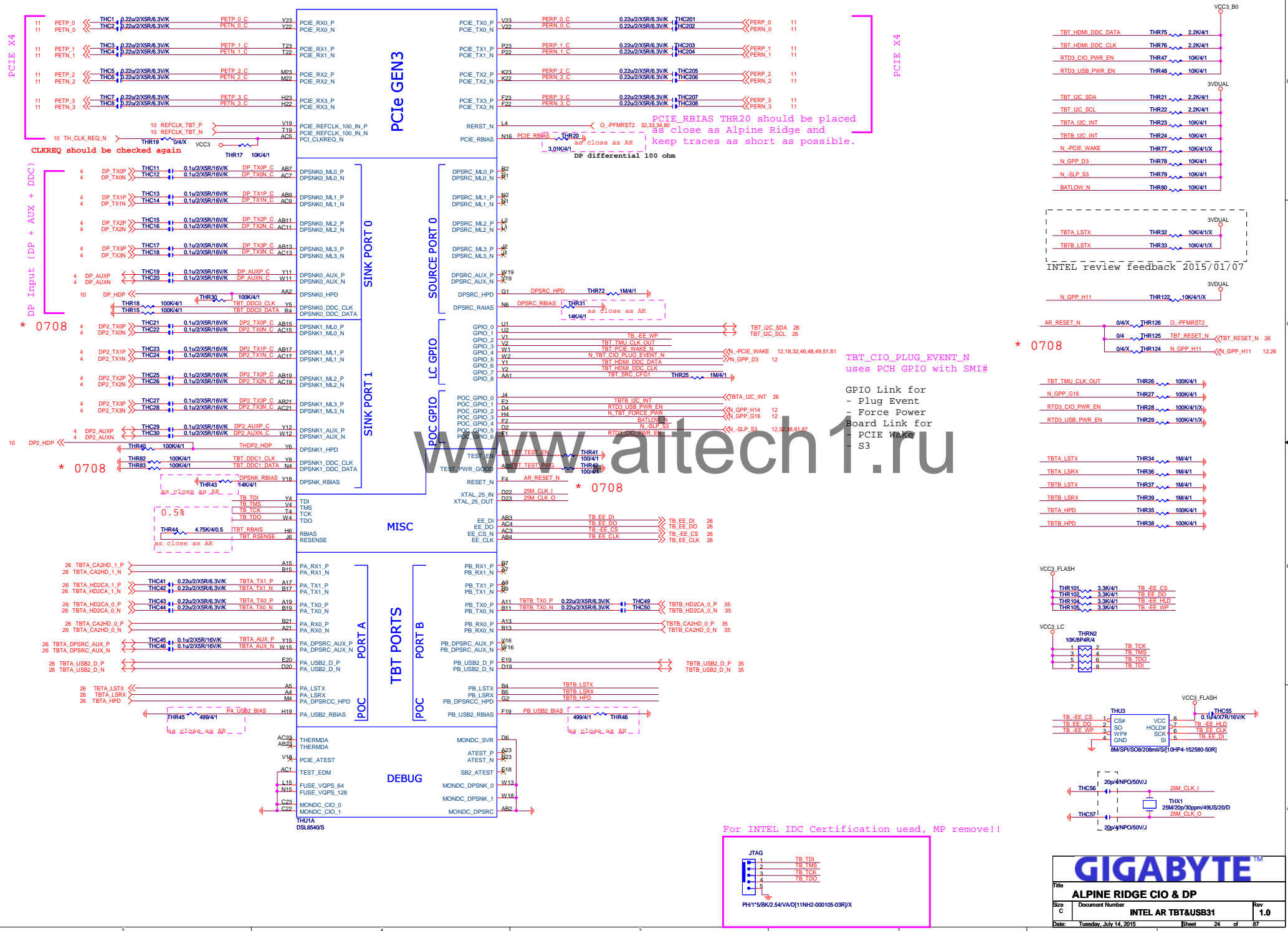
Creative Sound3Di ZxRSize
Custom

Document Number

GA-Z170X-Gaming G1Rev
1.0

Date: Tuesday, July 14, 2015

Sheet 23 of 87





Power Consumption Table					
	VCC3	3VDUAL	VCC3_LC	VCC3V3_ANA_PCIE VCC3V3_ANA_USB2	VCC0V9_LVR_OUT
Max Current(A)	1.05 A 40 mil	0.19 A 10 mil	0.03 A 5 mil	0.1 A 5 mil	0.06 A 5 mil
	VCC0V9_SVR	VCC0V9_DP	VCC0V9_PCIE	VCC0V9_USB	VCC0V9_CIO
Max Current(A)	1.83 A 80 mil	0.7 A 30 mil	0.58 A 30 mil	0.22 A 15 mil	0.28 A 15 mil

Base on INTEL AR reference SCH 1.01 (2015/05/13)



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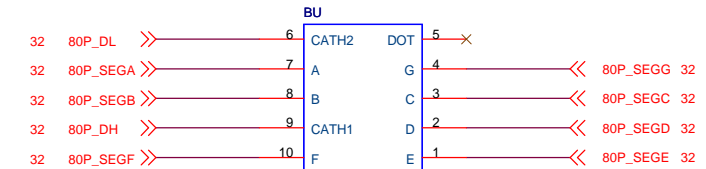
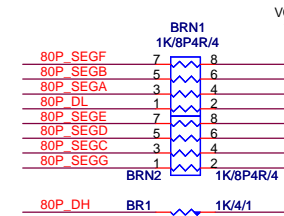
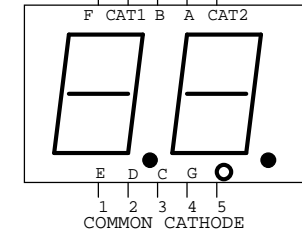
GIGABYTE™			
Title TBT _ HDMI 2.0			
Size Custom	Document Number GA-Z170X-Gaming G1		Rev 1.0
Date:	Tuesday, July 14, 2015		Sheet 28 of 87

Rev: 0.4

80 PORT

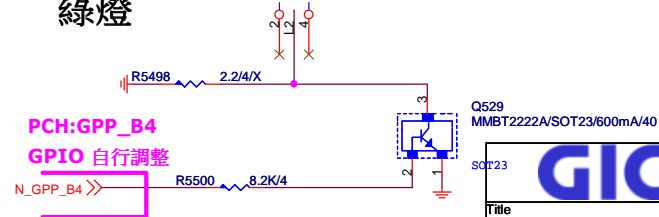
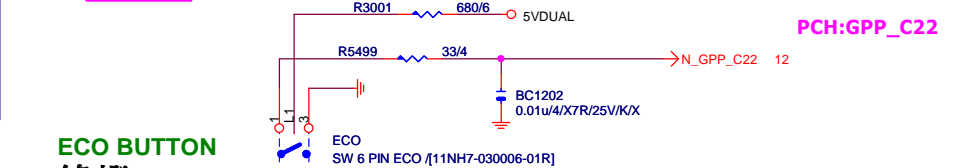
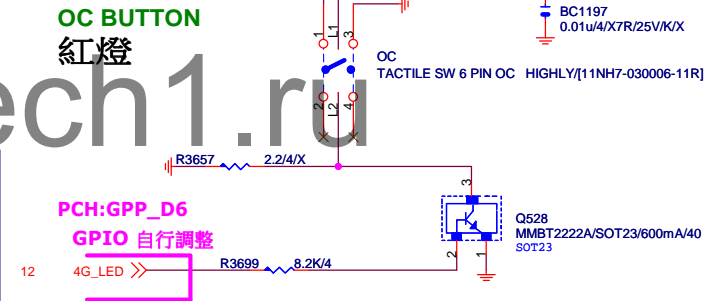
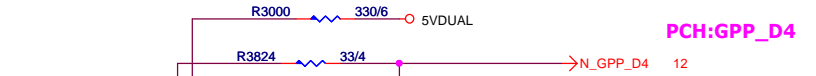
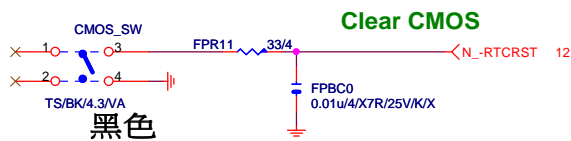
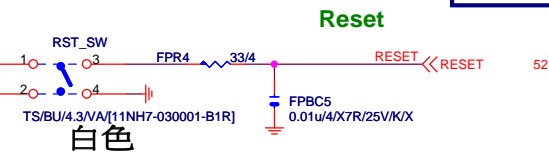
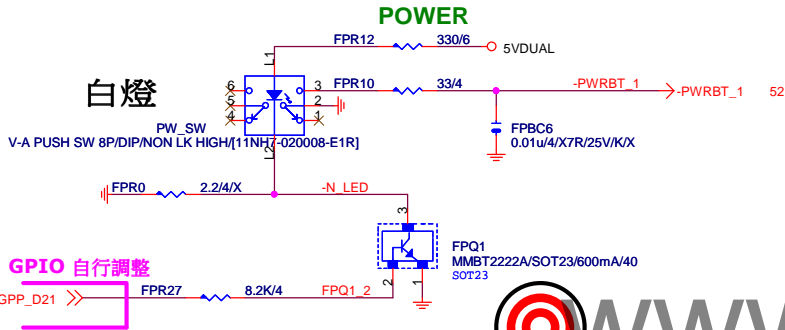
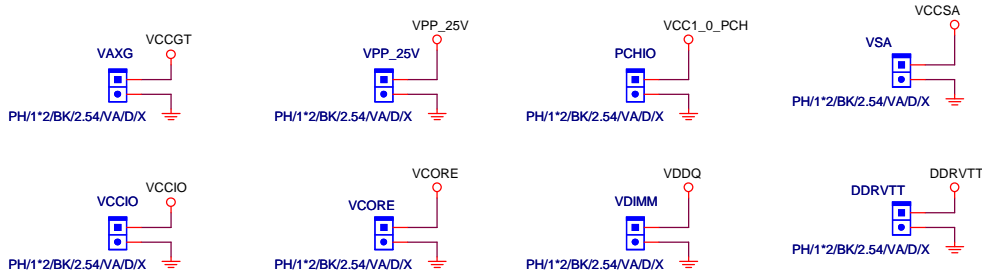
Physical Package
(TOP VIEW)

10 9 8 7 6



LDD2055-20-PF/D/[11DL1-020070-71R]

全黑

**GIGABYTE™**

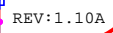
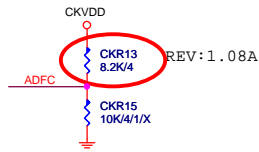
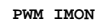
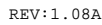
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Size	Document Number
Custom	GA-Z170X-Gaming G1

Date: Tuesday, July 14, 2015

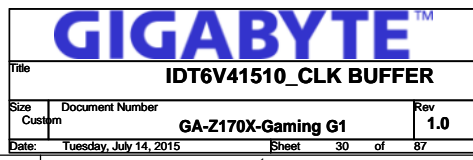
Sheet 29 of 87

IDT6V41530



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CK_VCO_SEL	VCO
0	400M
1	1200M



REV:1.07

RS_VCORE ~ RS_VCCGT CLOSE CPU_VCORE & VCCGT MOSFET
-PROCHOT:有mos heartsink不用prochot function

32 VREF ←

32 TR5
32 TR6 ←

OC14
1u4/X5R6.3V/K

RS_VCORE
100K/1/4/S

CLOSE_VCORE
MOSFET

OC15
1u4/X5R6.3V/K

RS_VCCGT
100K/1/4/S

CLOSE_VCCGT
MOSFET

126-133 degree

TEMP H/W MONITOR

32 VREF ←

32 SYS_TEMP ←

32 CPU_TEMP ←

32 PCH_TEMP ←

OC7
1u4/X5R6.3V/K

OC8
1u4/X5R6.3V/K

RS_SYS
100K/1/4/S

放板邊

OC16
1u4/X5R6.3V/K

RS_PCH
100K/1/4/S

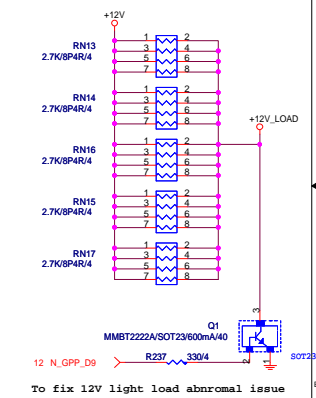
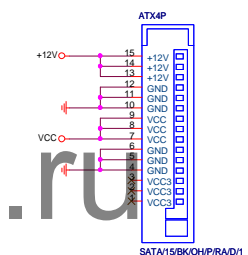
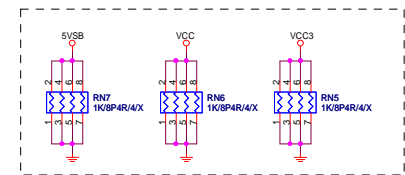
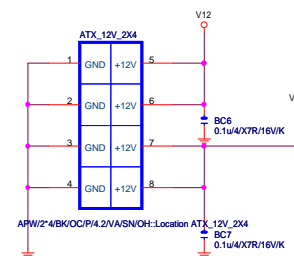
放PCH

OR73 10K/4/1

R674 8.2K/4

R675 10K/4/1

www.ait

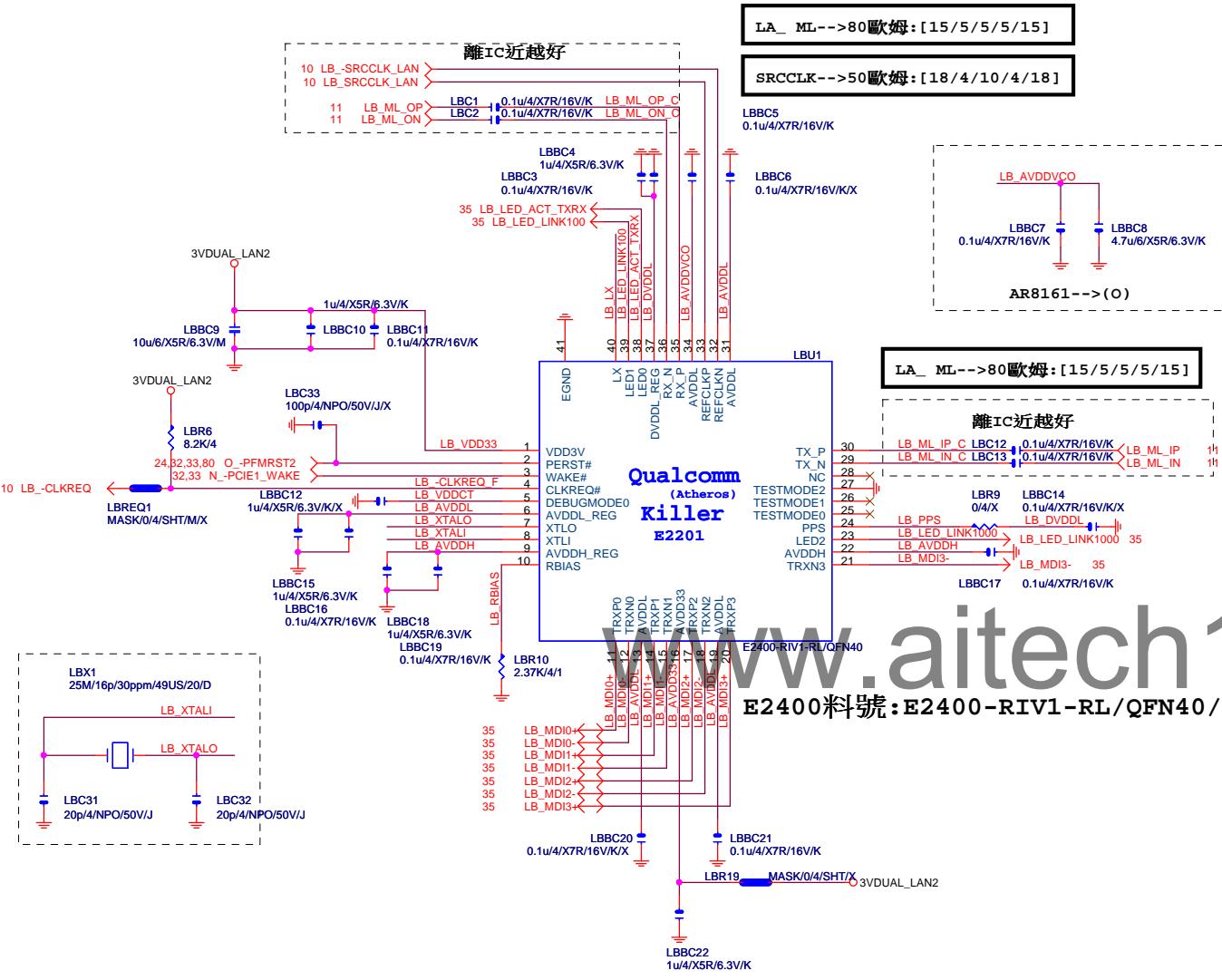




E2400料號:E2400-RIV1-RL/QFN40/[10HP2-402400-10R]

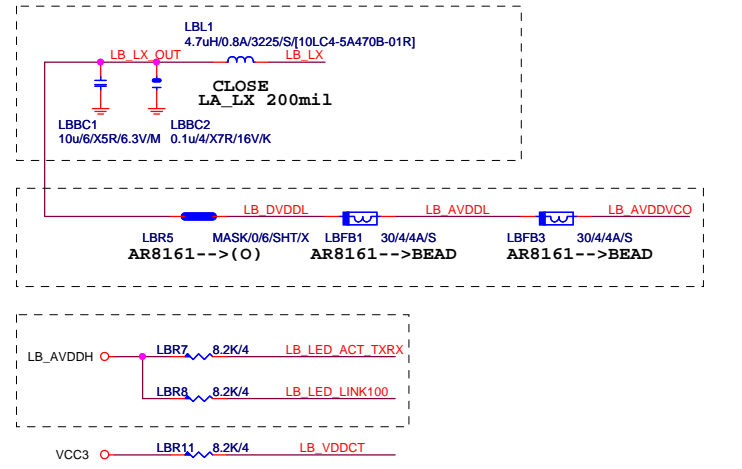
NOTE:

1. 3VDUAL_LAN1, 3VDUAL_LAN2
對接POWER供應電流
[目前暫接3VDUAL]



E2400料號:E2400-RIV1-RL/QFN40/[10HP2-402400-10R]

LAN POWER



3VDUAL_LAN

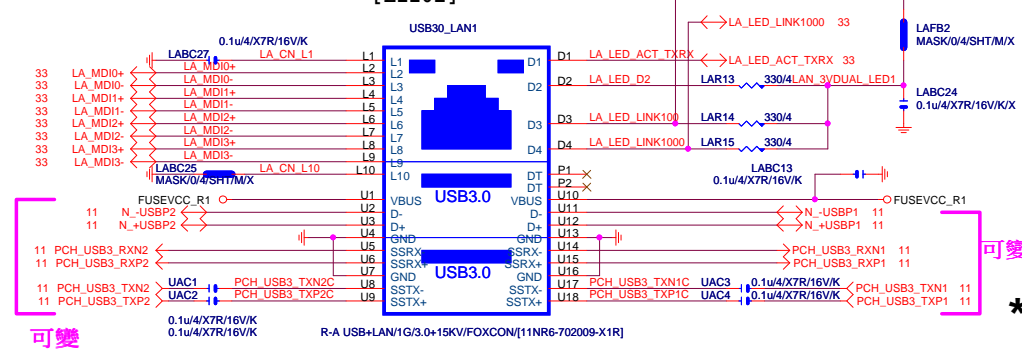
NOTE:
1. 3VDUAL_LAN1, 3VDUAL_LAN2
對接POWER供應電流
[目前暫接3VDUAL]

Gigabyte Technology	
Dual LAN~ E2201+E2201	
GA-Z170X-Gaming G1	
Title	Document Number
Size	Document Number
Custom	Document Number
Date:	Tuesday, July 14, 2015
Sheet	34 of 87

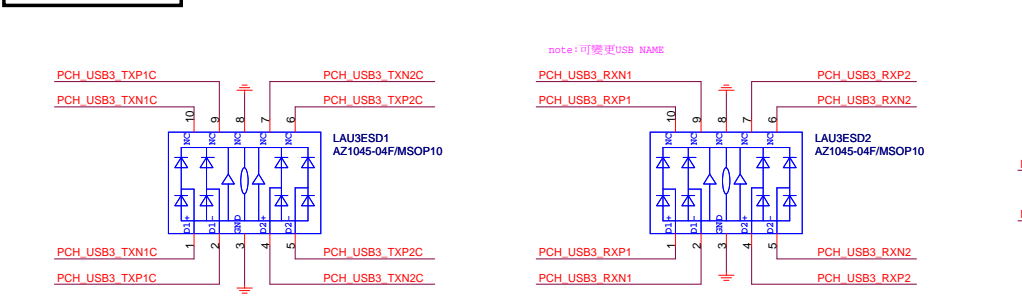
USB_LAN CONNECTOR-A R1.05

note:可變更USB NAME

[E2201]



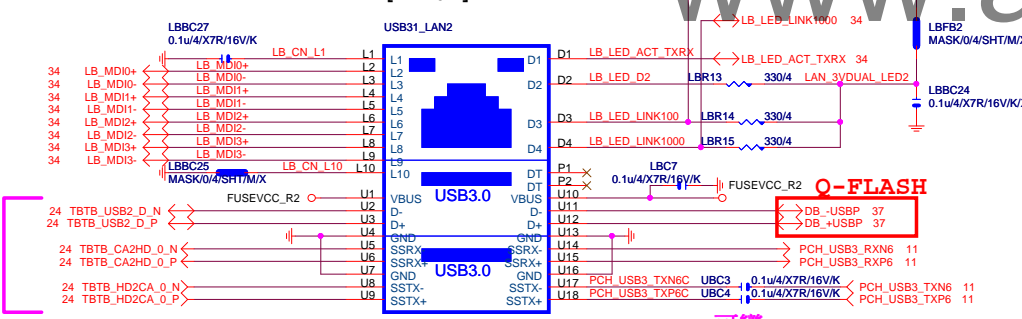
RMA ESD PROTECT



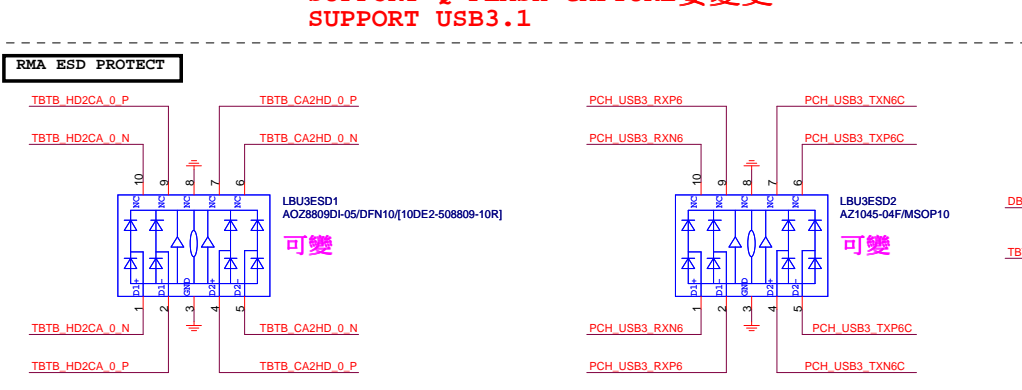
USB_LAN CONNECTOR-B

note:可變更USB NAME

[E2201]



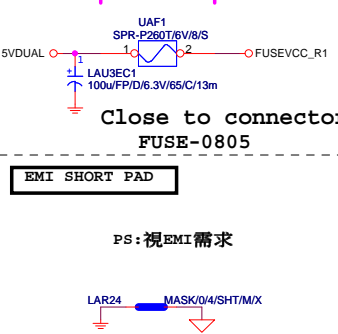
RMA ESD PROTECT



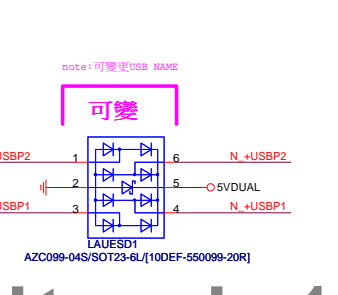
USB POWER

note:可變更FUSE

可變



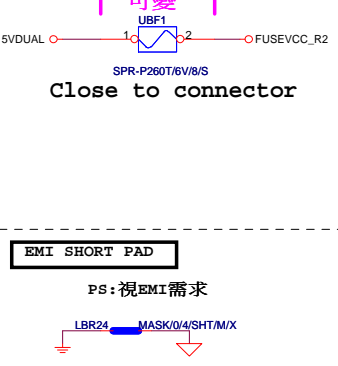
EMI SHORT PAD



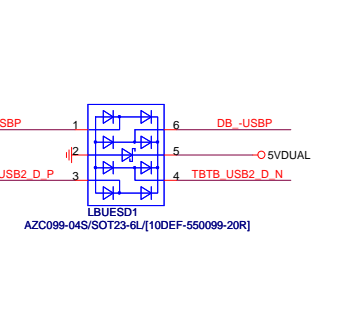
USB POWER

note:可變更FUSE

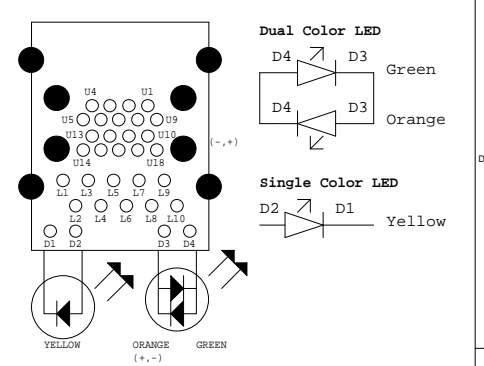
可變



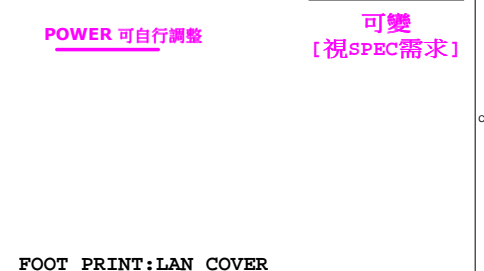
EMI SHORT PAD



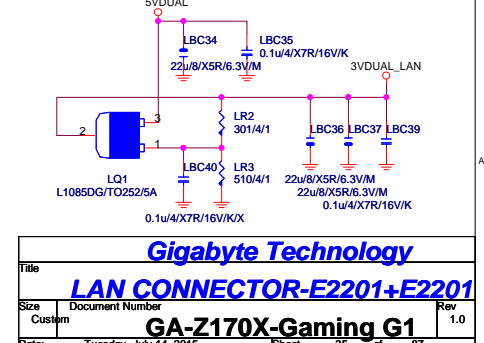
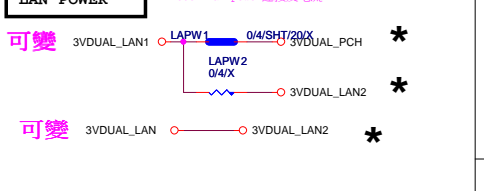
USB30_LAN LAYOUT示意图

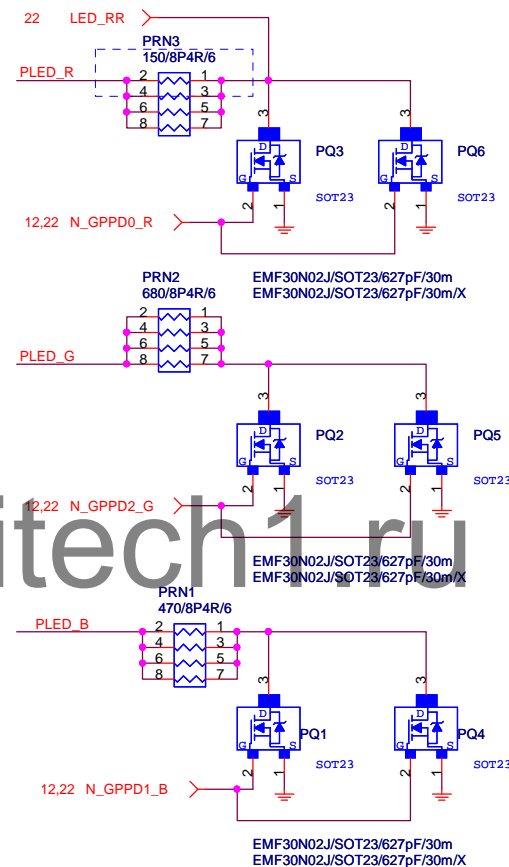
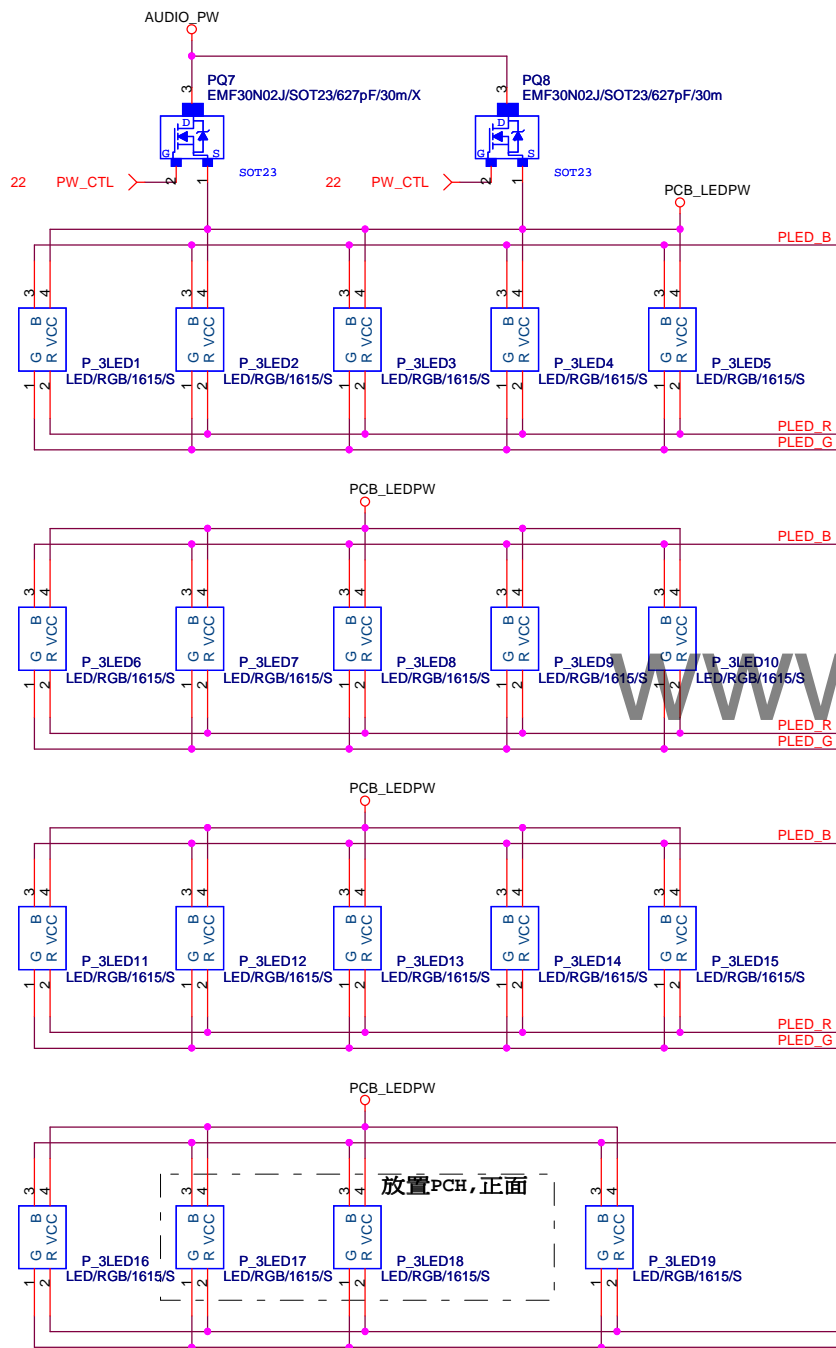


LAN COVER

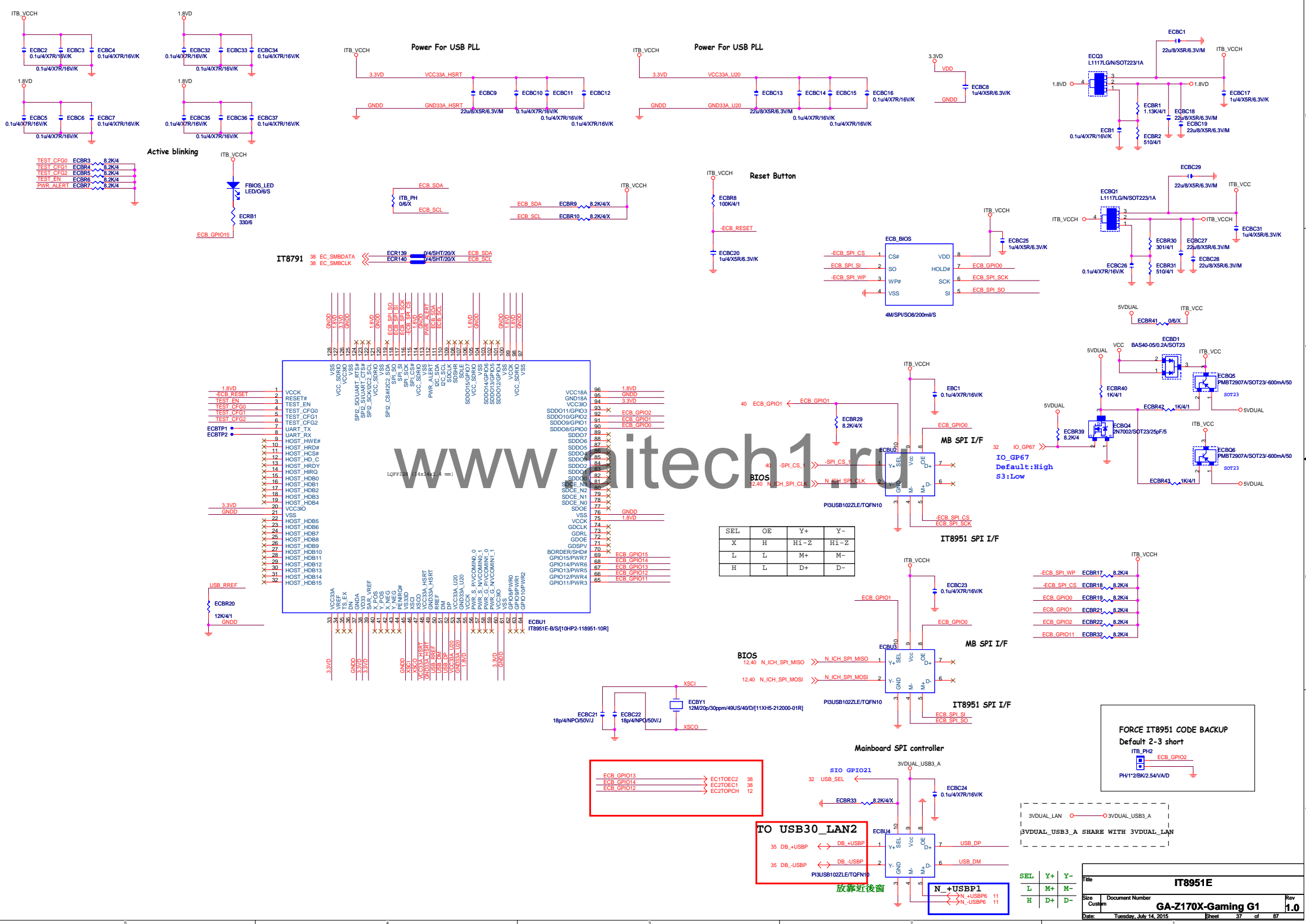


- NOTE:
- 3VDUAL_LAN1, 3VDUAL_LAN2 對接POWER供應電流 [目前暫接3VDUAL]
 - USB2.0/3.0對應USB PORT [目前暫接USB 0,1,2,3 PORT]
 - USB DROOP/DROP E-CAP
 - USB OC線路
- ~USB30_LAN1設定在ERP可LAN WAKEUP
~USB30_LAN2由獨立LAN-POWER-L1117供給





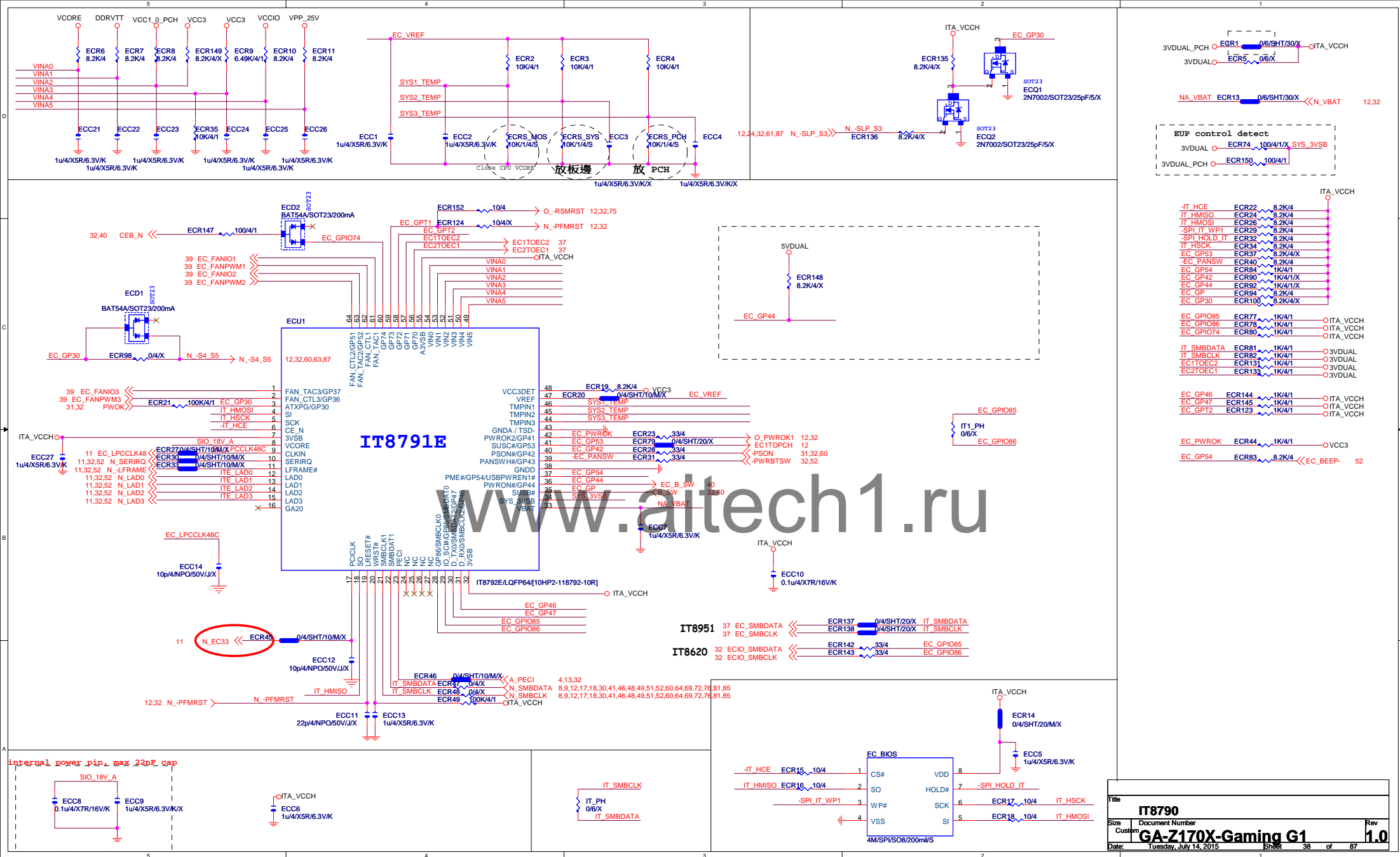
GIGABYTE™		
Title		
MODEL NAME LED		
Size	Document Number	Rev
Custom	GA-Z170X-Gaming G1	1.0
Date:	Tuesday, July 14, 2015	Sheet 36 of 87



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SEL	OE	Y+	Y-
X	H	H1-Z	H1-Z
L	L	M+	M-
H	L	D+	D-

FORCE IT8951 CODE BACKUP
Default 2-3 short
ITB_PH2
PH1+2BK/2.5V/4V/D



IT879X

IT879X

SIO

SIO

CPU_OPT

IT879X

SYSTEM FAN4

SIO

SYSTEM FAN5

SIO

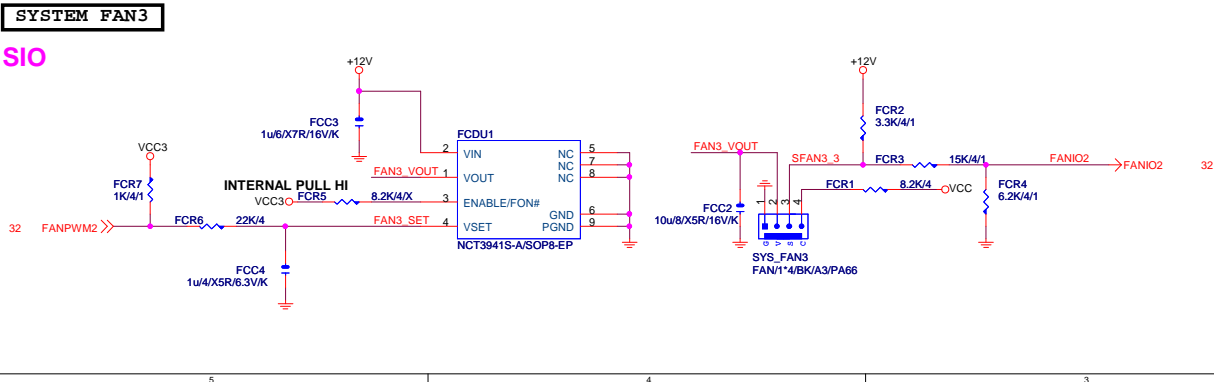
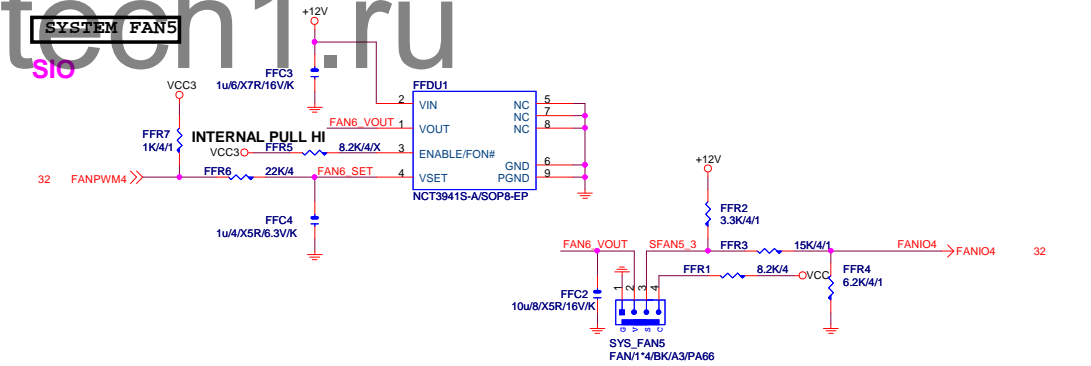
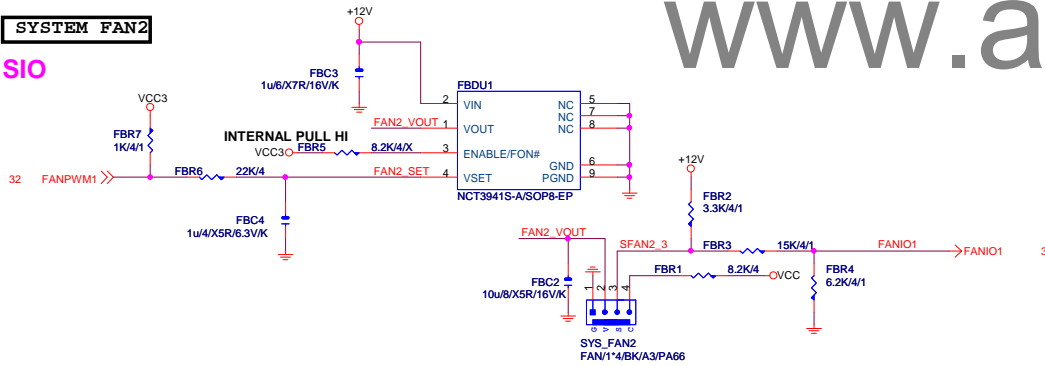
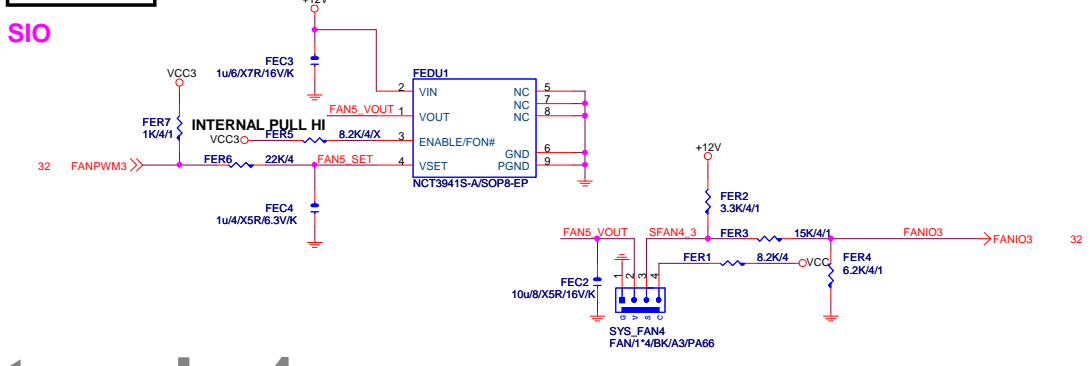
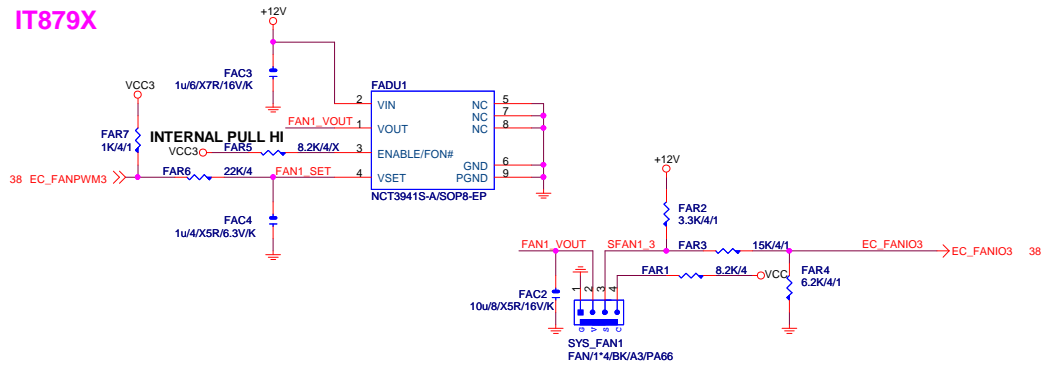
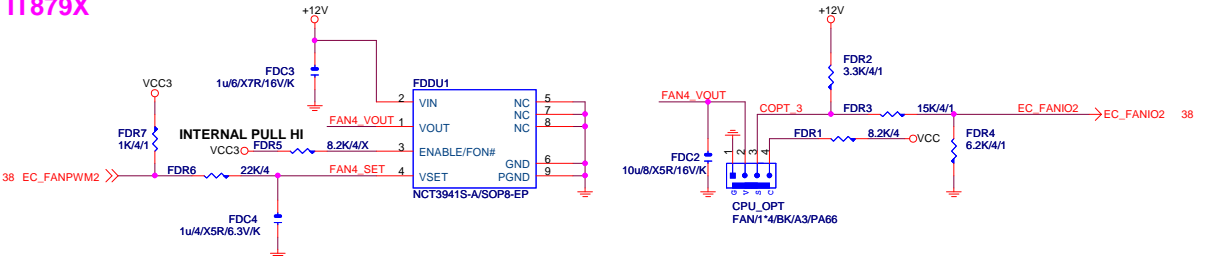
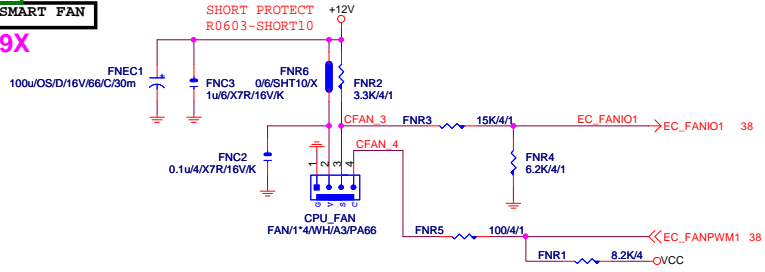
SYSTEM FAN1

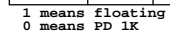
Linear SYS_FAN

Enable Function (NCT3941S)
Full Turn On Function (NCT3941S-A)

SYSTEM FAN2

SYSTEM FAN3





可變動

PA_EXP_TXP[0..15] >>> PA_EXP_TXP[0..15] 4
PA_EXP_TXN[0..15] >>> PA_EXP_TXN[0..15] 4
PA_EXP_RXP[0..15] >>> PA_EXP_RXP[0..15] 4
PA_EXP_RXN[0..15] >>> PA_EXP_RXN[0..15] 4

可變動
電容靠近CPU

PA_EXP_TXP15	YC169	0.22u4/X5R6.3V/K	PY_EXP_A_TXP15	AD1
PA_EXP_TXN15	YC170	0.22u4/X5R6.3V/K	PY_EXP_A_TXN15	AD2
PA_EXP_TXP14	YC171	0.22u4/X5R6.3V/K	PY_EXP_A_TXP14	AD2
PA_EXP_TXN14	YC172	0.22u4/X5R6.3V/K	PY_EXP_A_TXN14	AE2
PA_EXP_TXP13	YC173	0.22u4/X5R6.3V/K	PY_EXP_A_TXP13	AD4
PA_EXP_TXN13	YC174	0.22u4/X5R6.3V/K	PY_EXP_A_TXN13	AE4
PA_EXP_TXP12	YC175	0.22u4/X5R6.3V/K	PY_EXP_A_TXP12	AD5
PA_EXP_TXN12	YC176	0.22u4/X5R6.3V/K	PY_EXP_A_TXN12	AE5
PA_EXP_TXP11	YC177	0.22u4/X5R6.3V/K	PY_EXP_A_TXP11	AD7
PA_EXP_TXN11	YC178	0.22u4/X5R6.3V/K	PY_EXP_A_TXN11	AE7
PA_EXP_TXP10	YC179	0.22u4/X5R6.3V/K	PY_EXP_A_TXP10	AD8
PA_EXP_TXN10	YC180	0.22u4/X5R6.3V/K	PY_EXP_A_TXN10	AE8
PA_EXP_TXP9	YC181	0.22u4/X5R6.3V/K	PY_EXP_A_TXP9	AD10
PA_EXP_TXN9	YC182	0.22u4/X5R6.3V/K	PY_EXP_A_TXN9	AE10
PA_EXP_TXP8	YC183	0.22u4/X5R6.3V/K	PY_EXP_A_TXP8	AD11
PA_EXP_TXN8	YC184	0.22u4/X5R6.3V/K	PY_EXP_A_TXN8	AE11
PA_EXP_TXP7	YC185	0.22u4/X5R6.3V/K	PY_EXP_A_TXP7	AD13
PA_EXP_TXN7	YC186	0.22u4/X5R6.3V/K	PY_EXP_A_TXN7	AE13
PA_EXP_TXP6	YC187	0.22u4/X5R6.3V/K	PY_EXP_A_TXP6	AD14
PA_EXP_TXN6	YC188	0.22u4/X5R6.3V/K	PY_EXP_A_TXN6	AE14
PA_EXP_TXP5	YC189	0.22u4/X5R6.3V/K	PY_EXP_A_TXP5	AD16
PA_EXP_TXN5	YC190	0.22u4/X5R6.3V/K	PY_EXP_A_TXN5	AE16
PA_EXP_TXP4	YC191	0.22u4/X5R6.3V/K	PY_EXP_A_TXP4	AD17
PA_EXP_TXN4	YC192	0.22u4/X5R6.3V/K	PY_EXP_A_TXN4	AE17
PA_EXP_TXP3	YC193	0.22u4/X5R6.3V/K	PY_EXP_A_TXP3	AD18
PA_EXP_TXN3	YC194	0.22u4/X5R6.3V/K	PY_EXP_A_TXN3	AE18
PA_EXP_TXP2	YC195	0.22u4/X5R6.3V/K	PY_EXP_A_TXP2	AD20
PA_EXP_TXN2	YC196	0.22u4/X5R6.3V/K	PY_EXP_A_TXN2	AE20
PA_EXP_TXP1	YC197	0.22u4/X5R6.3V/K	PY_EXP_A_TXP1	AD22
PA_EXP_TXN1	YC198	0.22u4/X5R6.3V/K	PY_EXP_A_TXN1	AE22
PA_EXP_TXP0	YC199	0.22u4/X5R6.3V/K	PY_EXP_A_TXP0	AD23
PA_EXP_TXN0	YC200	0.22u4/X5R6.3V/K	PY_EXP_A_TXN0	AE23

10 PY_PEX_CLKP >>>
10 -PY_PEX_CLKN >>>

1.8VCC

YR111

8.2K/4

STRAP_RESERVED0

V18

X-B0

X-W8

X-W8

PEX_REFCLKP

PEX_REFCLKN

PEX_PERST#

STRAP_RESERVED0

NCB09

PEX_REFCLKP_SSC0

PEX_REFCLKN_SSC0

STRAP_RESERVED14

STRAP_RESERVED15

EE_CS#

EE_CS#

EE_DO

EE_DO

EE_SK

EE_SK

W3

JTAG_TCK

JTAG_TDI

JTAG_TDO

JTAG_TMS

JTAG_TRST#

I2C_SCL0

I2C_SDA0

AD12

W14

K19

F19

B18

B22

YR109

8.2K/4

I2C_SCL0

1.8VCC

YR110

8.2K/4

I2C_SDA0

PEX8747BA0FBCGBCA575[10TA1-0887-20R]

1.8VCC

1.8VCC

1.8VCC

1.8VCC

YR7

8.2K/4

YR9

8.2K/4

YR8

8.2K/4

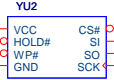
-Y EE_CS

Y EE_DI

Y EE_DO

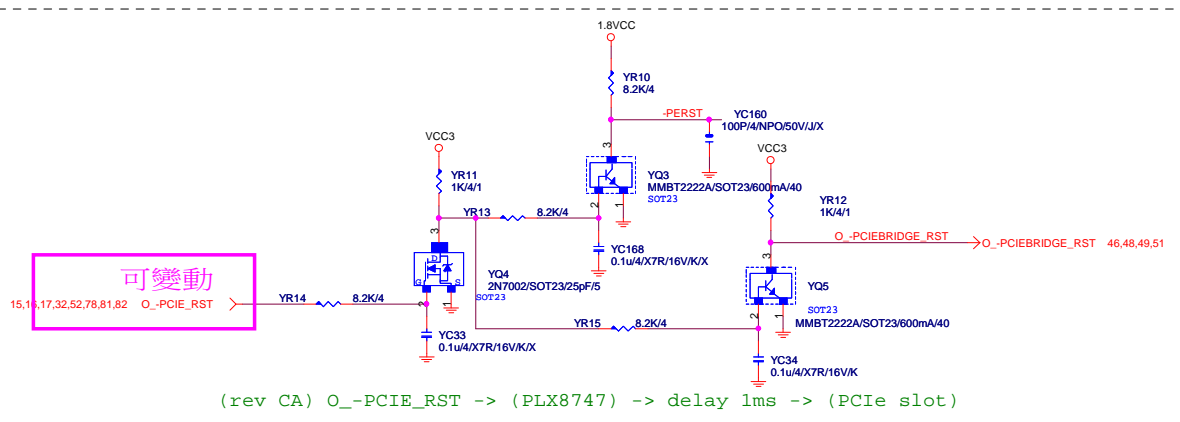
Y EE_SK

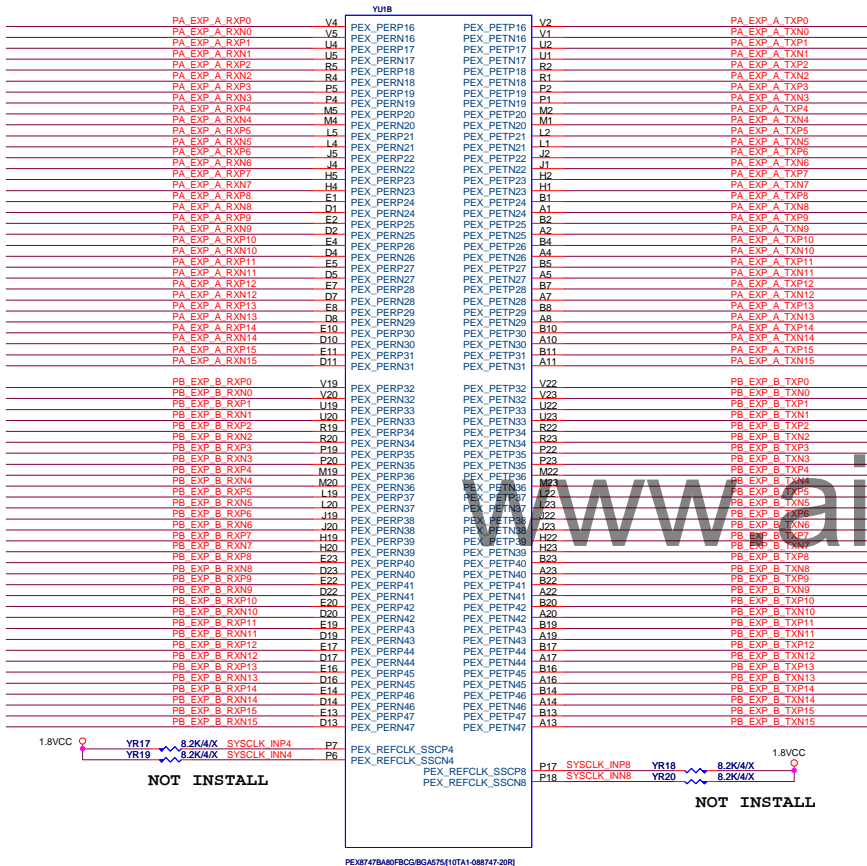
Y EE_SK



512K/SPI/S08/150mV/S[10HP4-175128-20R]

可變動





PA EXP A RXP[0..7] >>> PA_EXP_A_RXP[0..7] 50

PA EXP A RXN[0..7] >>> PA_EXP_A_RXN[0..7] 50

PA EXP A TXP[0..7] >>> PA_EXP_A_TXP[0..7] 50

PA EXP A TXN[0..7] >>> PA_EXP_A_TXN[0..7] 50

PA EXP A RXP[8..15] >>> PA_EXP_A_RXP[8..15] 49

PA EXP A RXN[8..15] >>> PA_EXP_A_RXN[8..15] 49

PA EXP A TXP[8..15] >>> PA_EXP_A_TXP[8..15] 49

PA EXP A TXN[8..15] >>> PA_EXP_A_TXN[8..15] 49

PB EXP B RXP[0..7] >>> PB_EXP_B_RXP[0..7] 46

PB EXP B RXN[0..7] >>> PB_EXP_B_RXN[0..7] 46

PB EXP B TXP[0..7] >>> PB_EXP_B_TXP[0..7] 46

PB EXP B TXN[0..7] >>> PB_EXP_B_TXN[0..7] 46

PB EXP B RXP[8..15] >>> PB_EXP_B_RXP[8..15] 47

PB EXP B RXN[8..15] >>> PB_EXP_B_RXN[8..15] 47

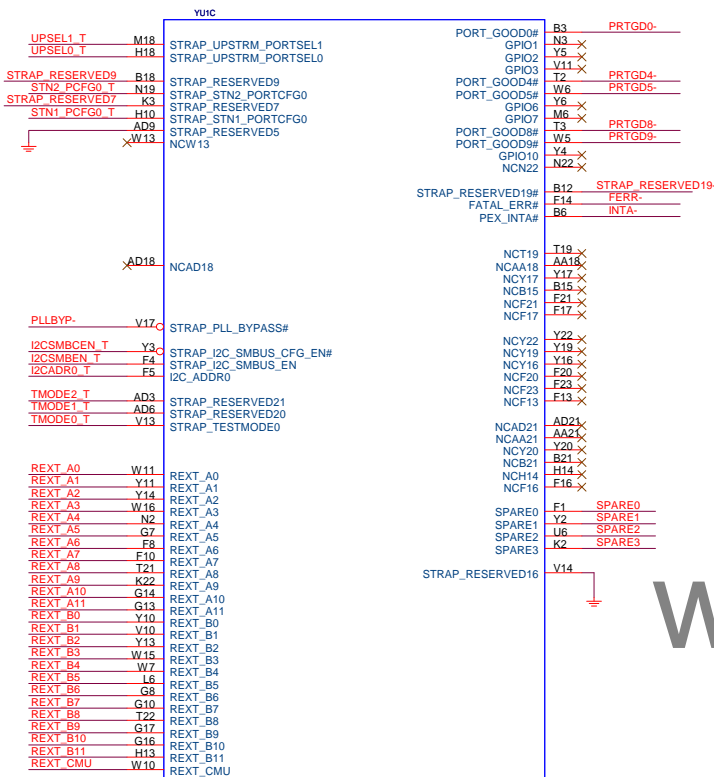
PB EXP B TXP[8..15] >>> PB_EXP_B_TXP[8..15] 47

PB EXP B TXN[8..15] >>> PB_EXP_B_TXN[8..15] 47

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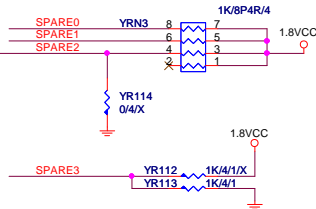
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Size		Document Number				Rev				
Custom		GA-Z170X-Gaming G1				1.0				
Date:		Tuesday, July 14, 2015			Sheet		42 of		87	

1.0

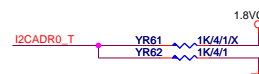
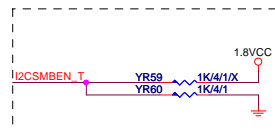
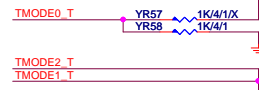
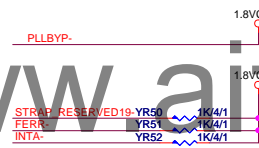
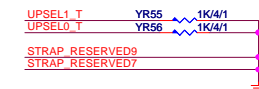
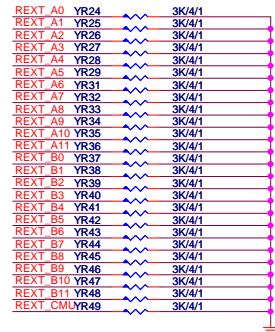


PEX8747BA80FBC0/GA575(10TA1-088747-20R)

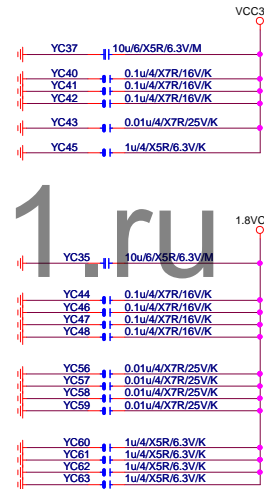
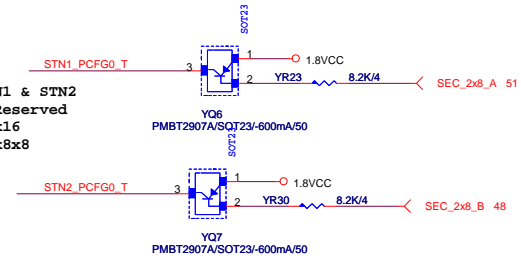
可變動
32 IO_GP27 ← YR115 04/SHT/MX
from Open-Drain standby GPIO
(default : H1)
(Lo : Genl compatibility)



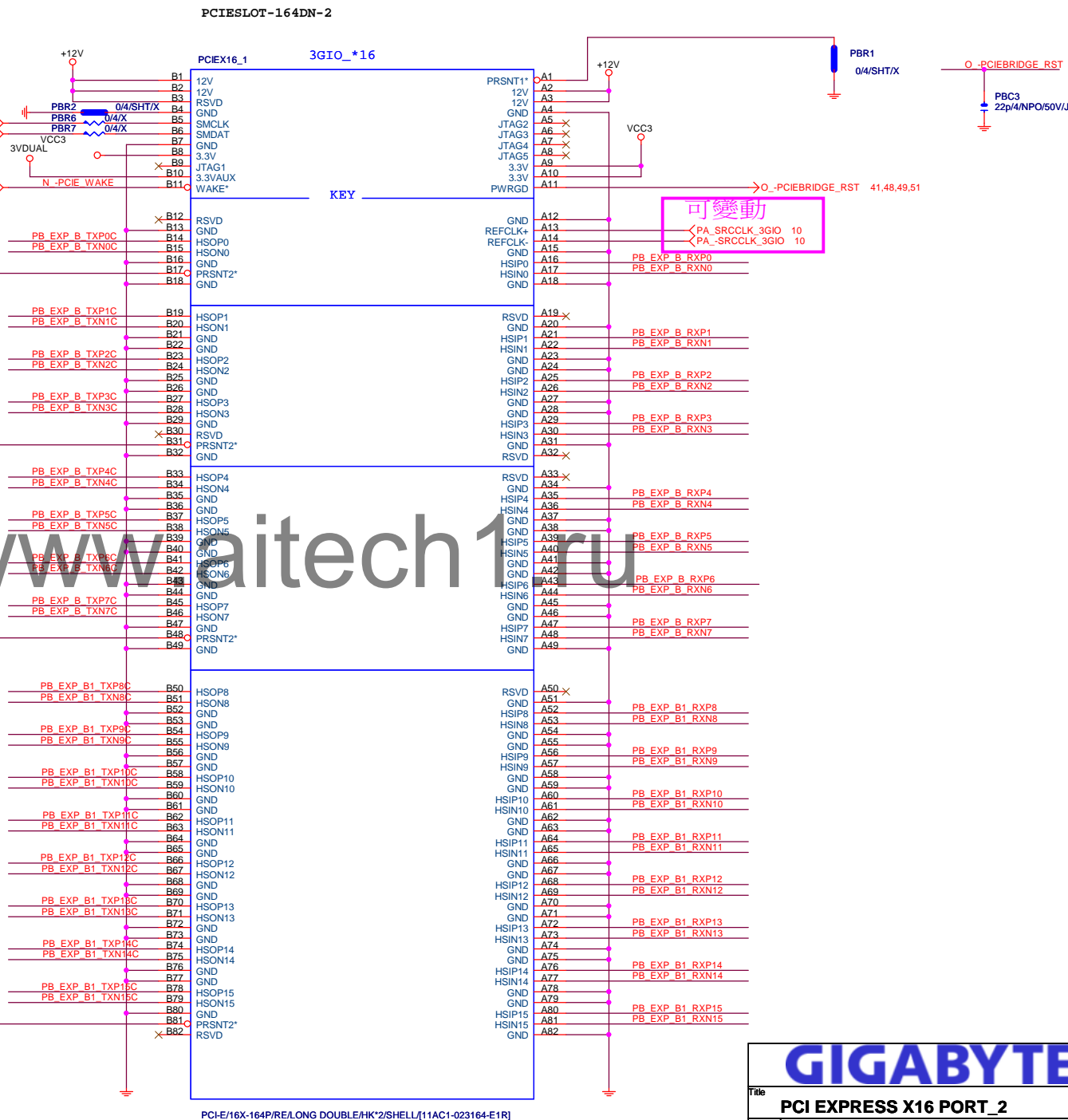
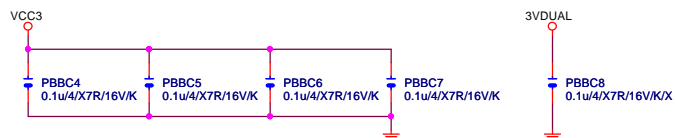
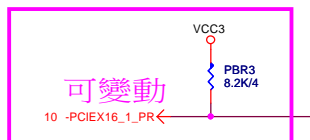
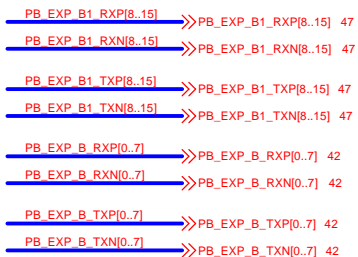
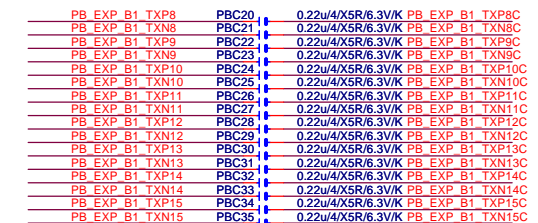
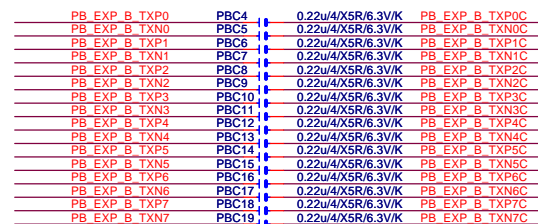
Resistors should be placed close to YU1

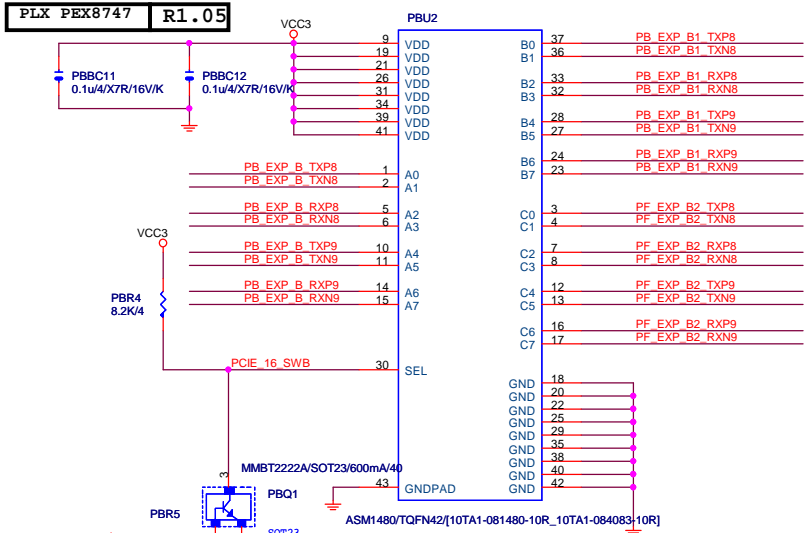


STRAP STN1 & STN2
0 = 0 = Reserved
Z = 1 = x16
1 = 2 = x8x8

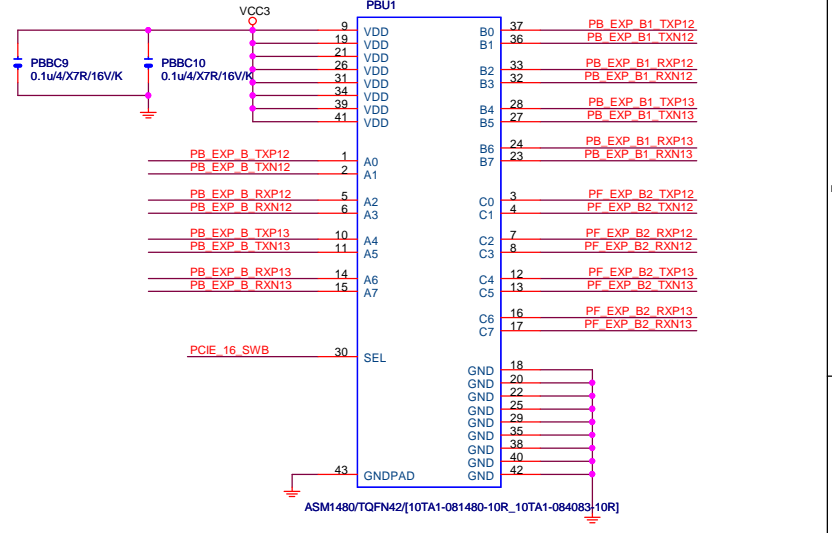
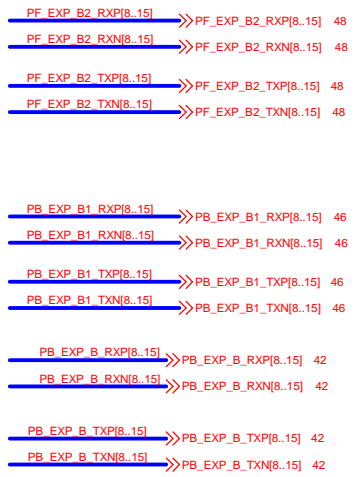


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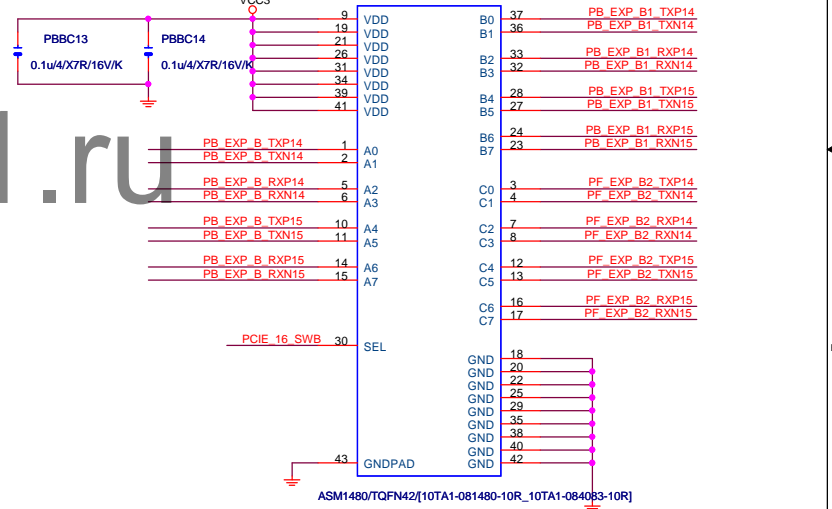




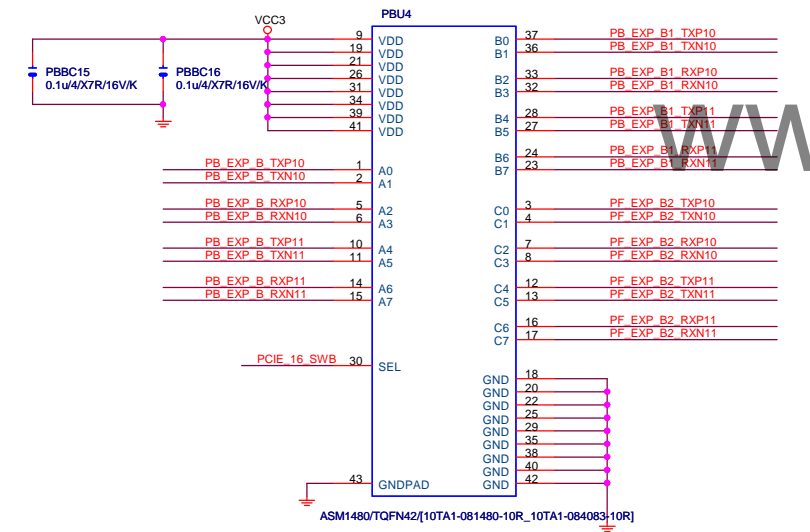
Function	SEL
A--> B	L
A--> C	H



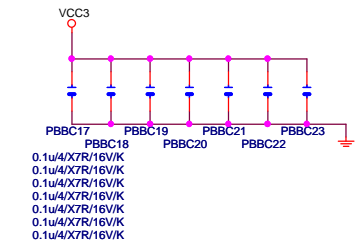
Function	SEL
A--> B	L
A--> C	H



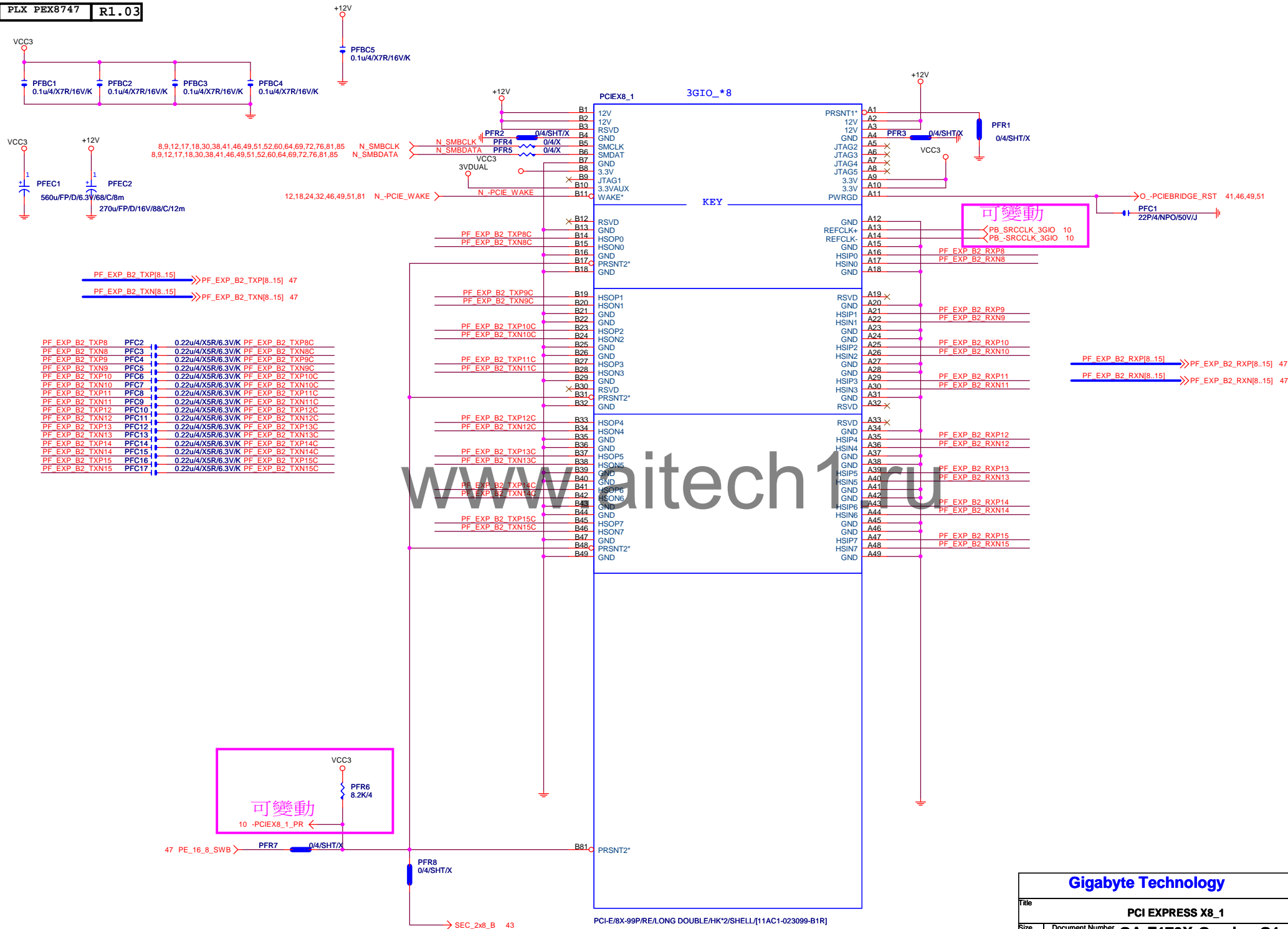
Function	SEL
A--> B	L
A--> C	H



Function	SEL
A--> B	L
A--> C	H

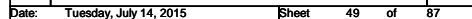


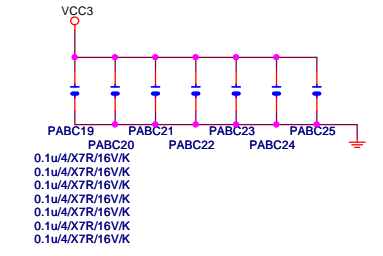
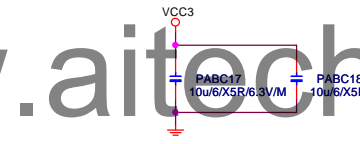
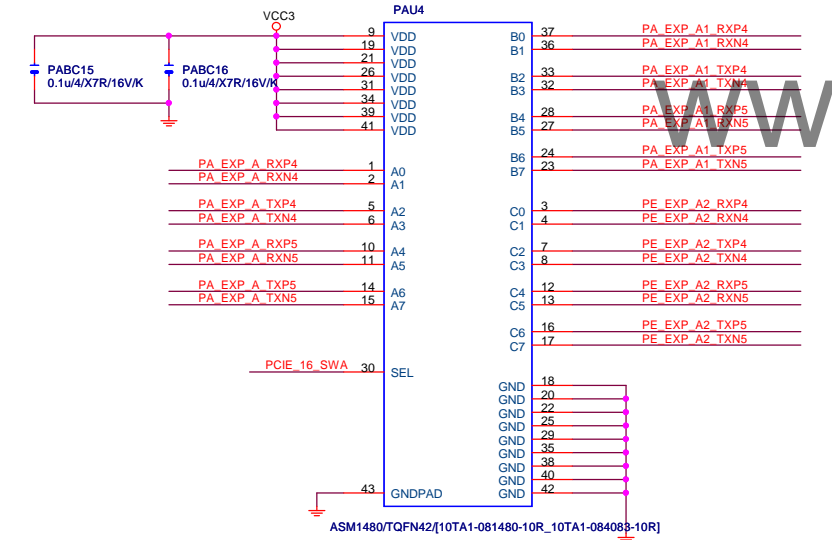
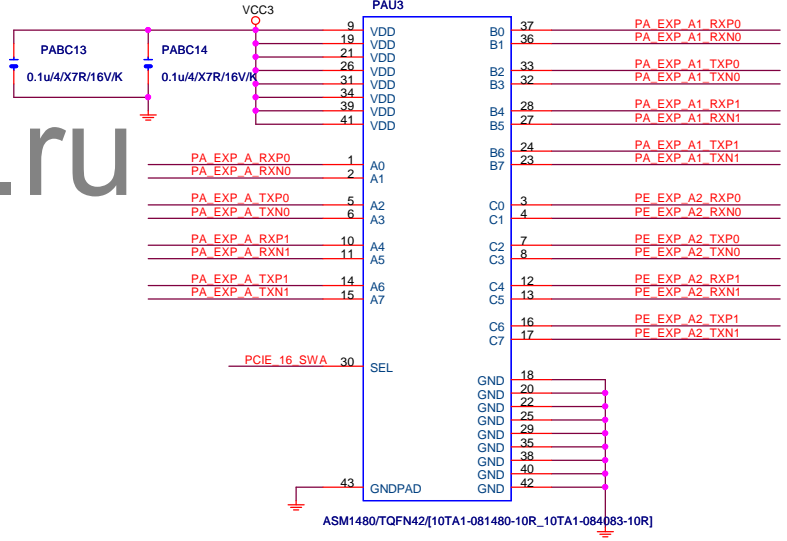
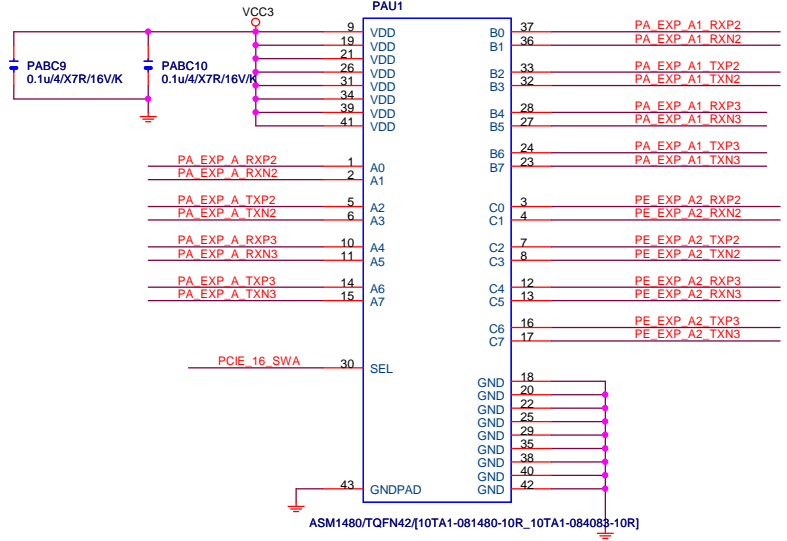
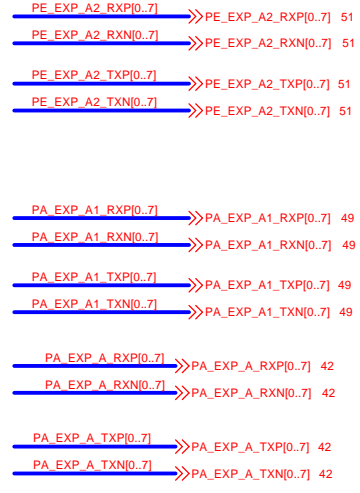
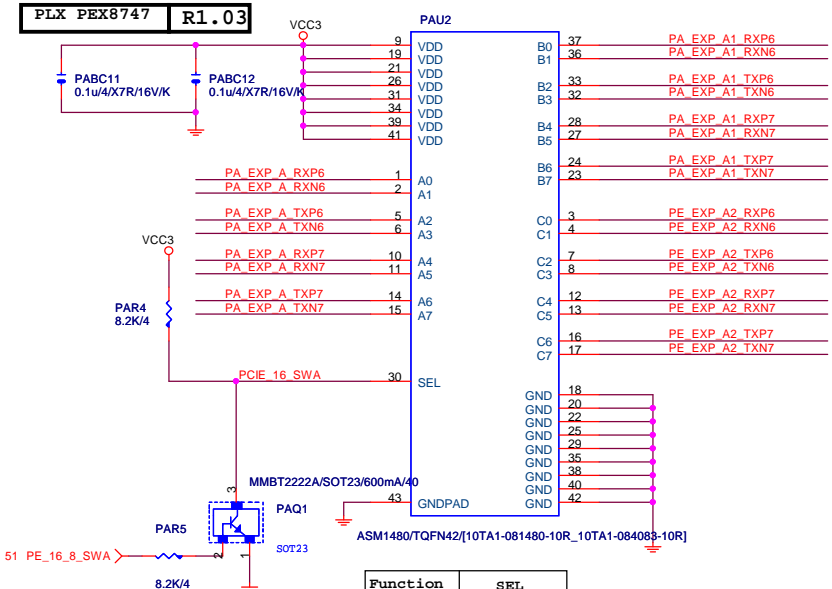
Function	SEL
A--> B	L
A--> C	H

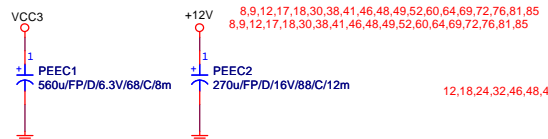
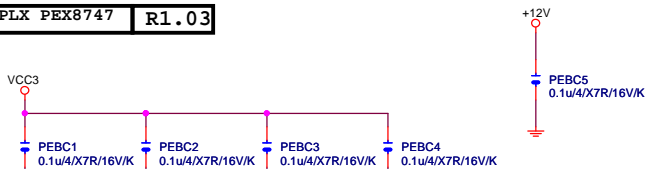


Gigabyte Technology

Title		PCI EXPRESS X8_1	
Size	Document Number	GA-Z170X-Gaming G1	Rev 1.0
Custom			
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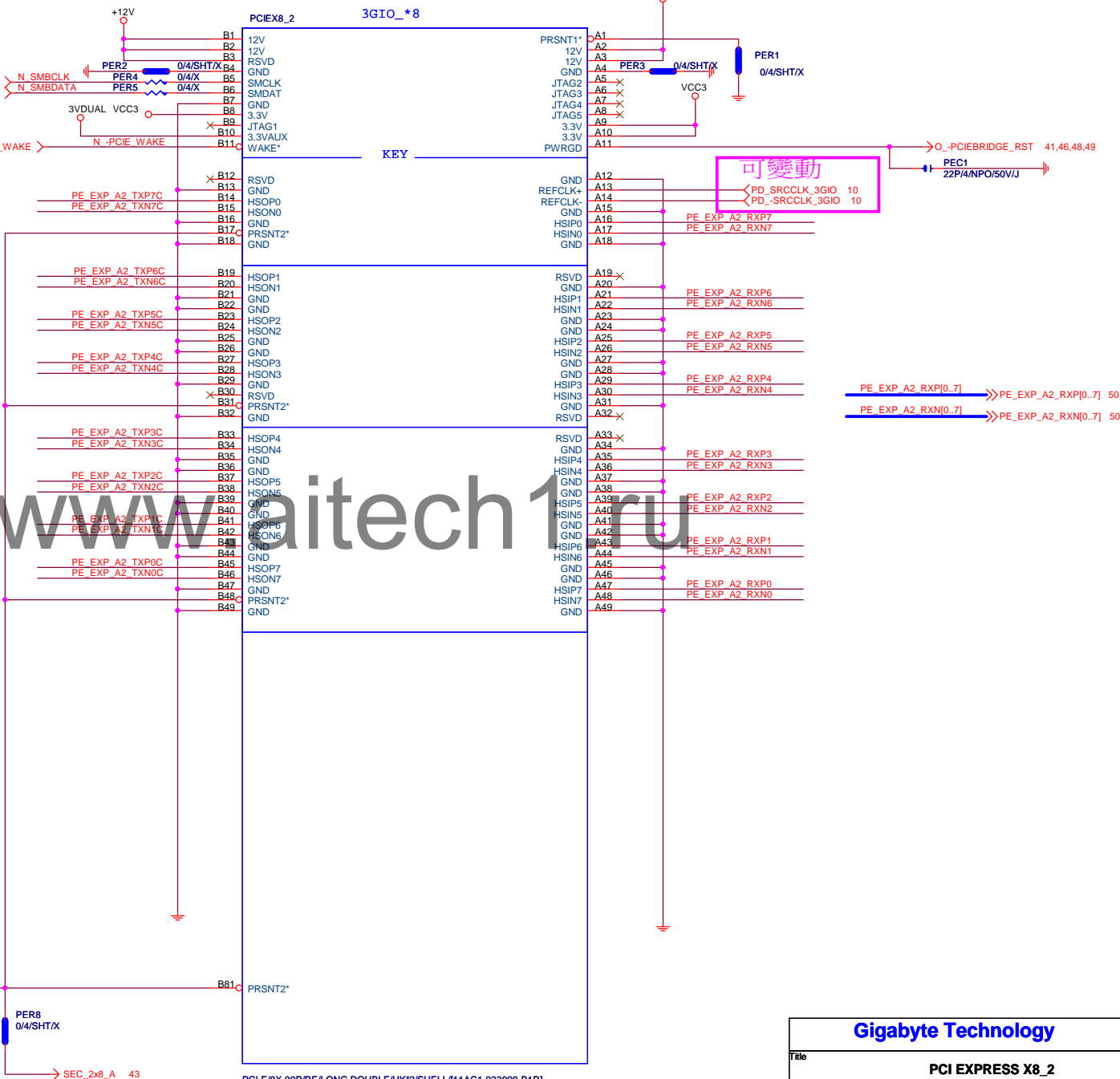
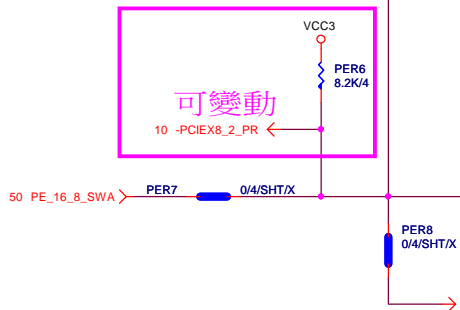






PE_EXP_A2_TXP[0..7] >> PE_EXP_A2_TXP[0..7] 50
PE_EXP_A2_TXN[0..7] >> PE_EXP_A2_TXN[0..7] 50

PE_EXP_A2_TXP7	PEC2	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP7C
PE_EXP_A2_TXN7	PEC3	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN7C
PE_EXP_A2_TXP6	PEC4	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP6C
PE_EXP_A2_TXN6	PEC5	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN6C
PE_EXP_A2_TXP5	PEC6	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP5C
PE_EXP_A2_TXN5	PEC7	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN5C
PE_EXP_A2_TXP4	PEC8	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP4C
PE_EXP_A2_TXN4	PEC9	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN4C
PE_EXP_A2_TXP3	PEC10	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP3C
PE_EXP_A2_TXN3	PEC11	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN3C
PE_EXP_A2_TXP2	PEC12	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP2C
PE_EXP_A2_TXN2	PEC13	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN2C
PE_EXP_A2_TXP1	PEC14	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP1C
PE_EXP_A2_TXN1	PEC15	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN1C
PE_EXP_A2_TXP0	PEC16	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXP0C
PE_EXP_A2_TXN0	PEC17	0.22u/4/X5R/6.3V/K	PE_EXP_A2_TXN0C

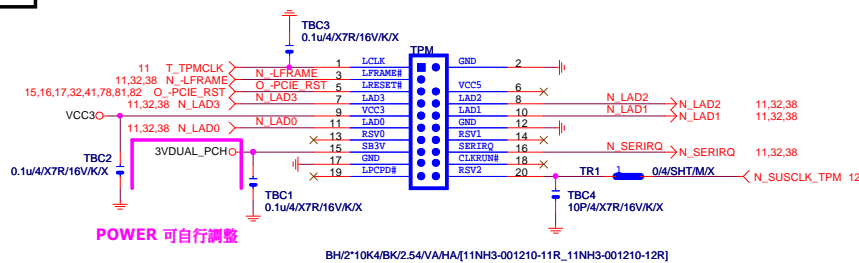


PCI-E/BX-99P/RE/LONG DOUBLE/HK*2/SHELL/11AC1-023099-B1R1

Gigabyte Technology

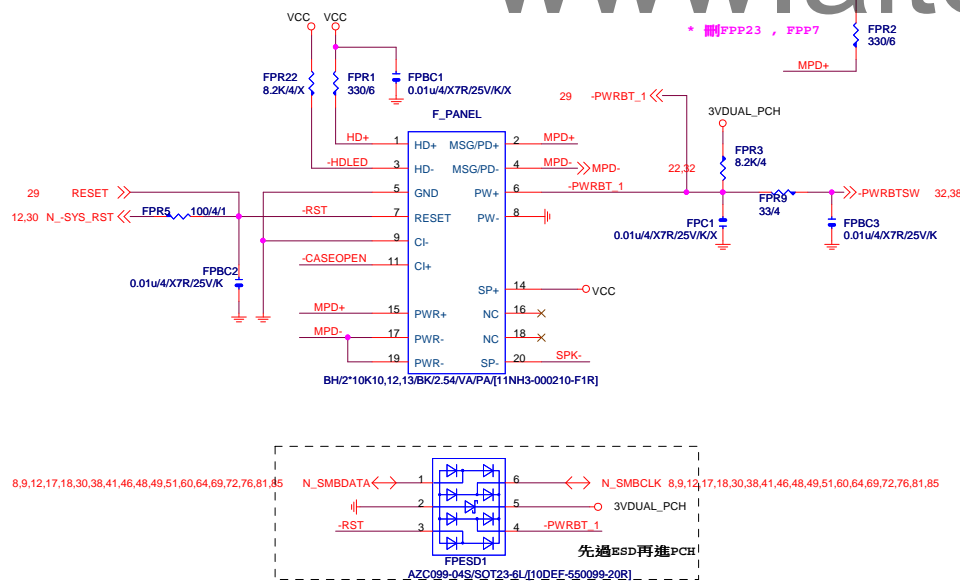
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Size Custom	Document Number	GA-Z170X-Gaming G1	
	Rev	1.0	
Date: Tuesday, July 14, 2015		Sheet	51 of 87

TPM CONNECT

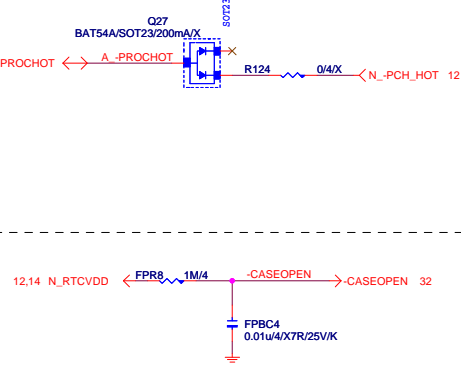


Thunderbolt

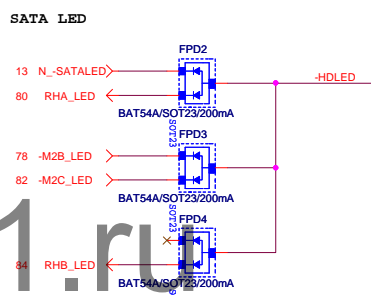
INTEL FRONT PANEL



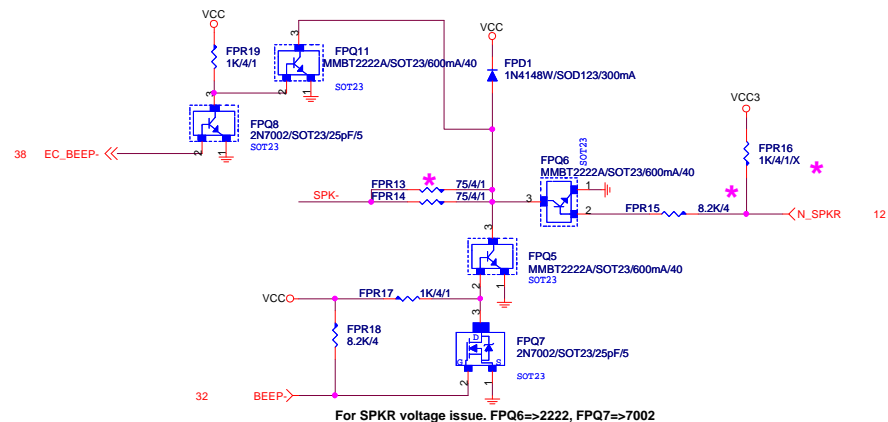
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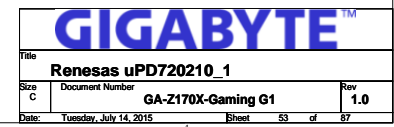


SATA LED



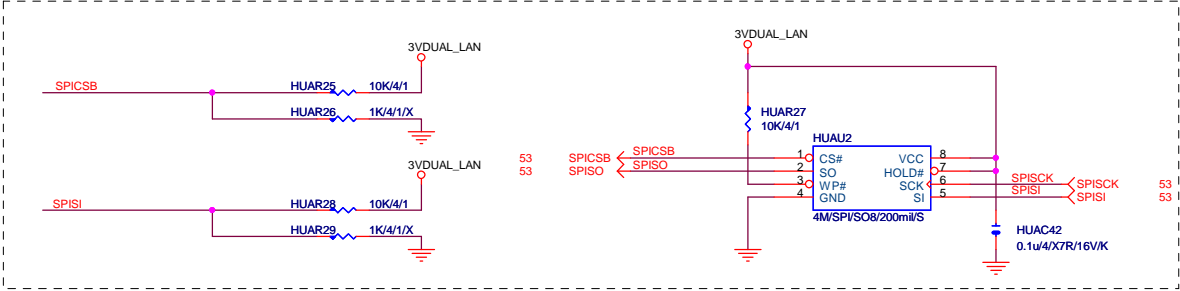
SPEAKER



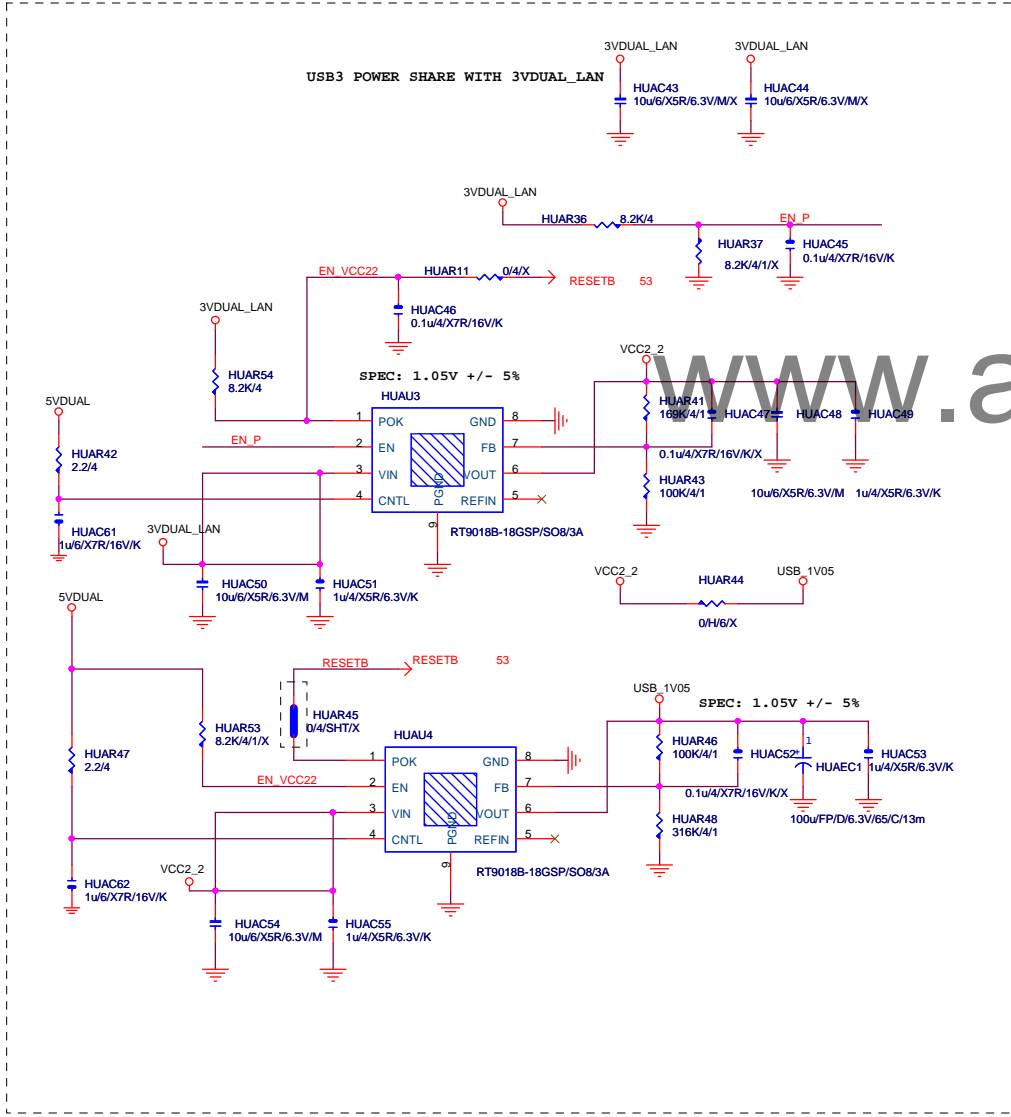


Single USB3 HUB used

External SPI ROM ; SPI ROM attached mode

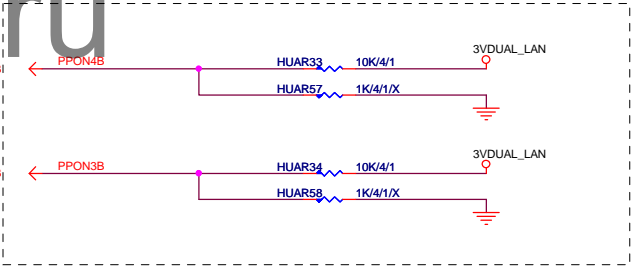
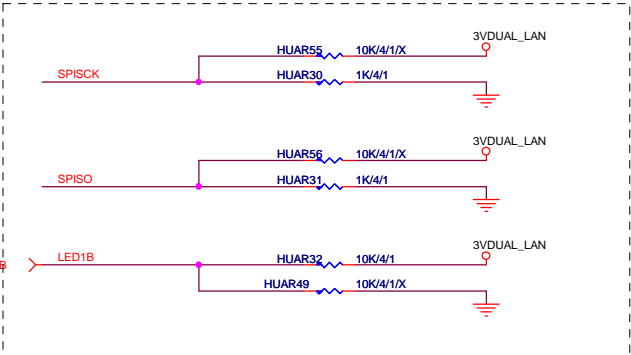


Battery Charging

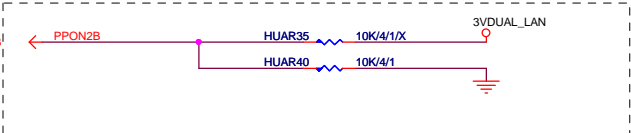


Number of Ports ; 4Ports mode

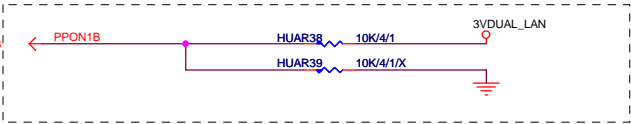
PPON3B / PPN4B : H / H (4 port)
PPON3B / PPN4B : L / L (2 port)

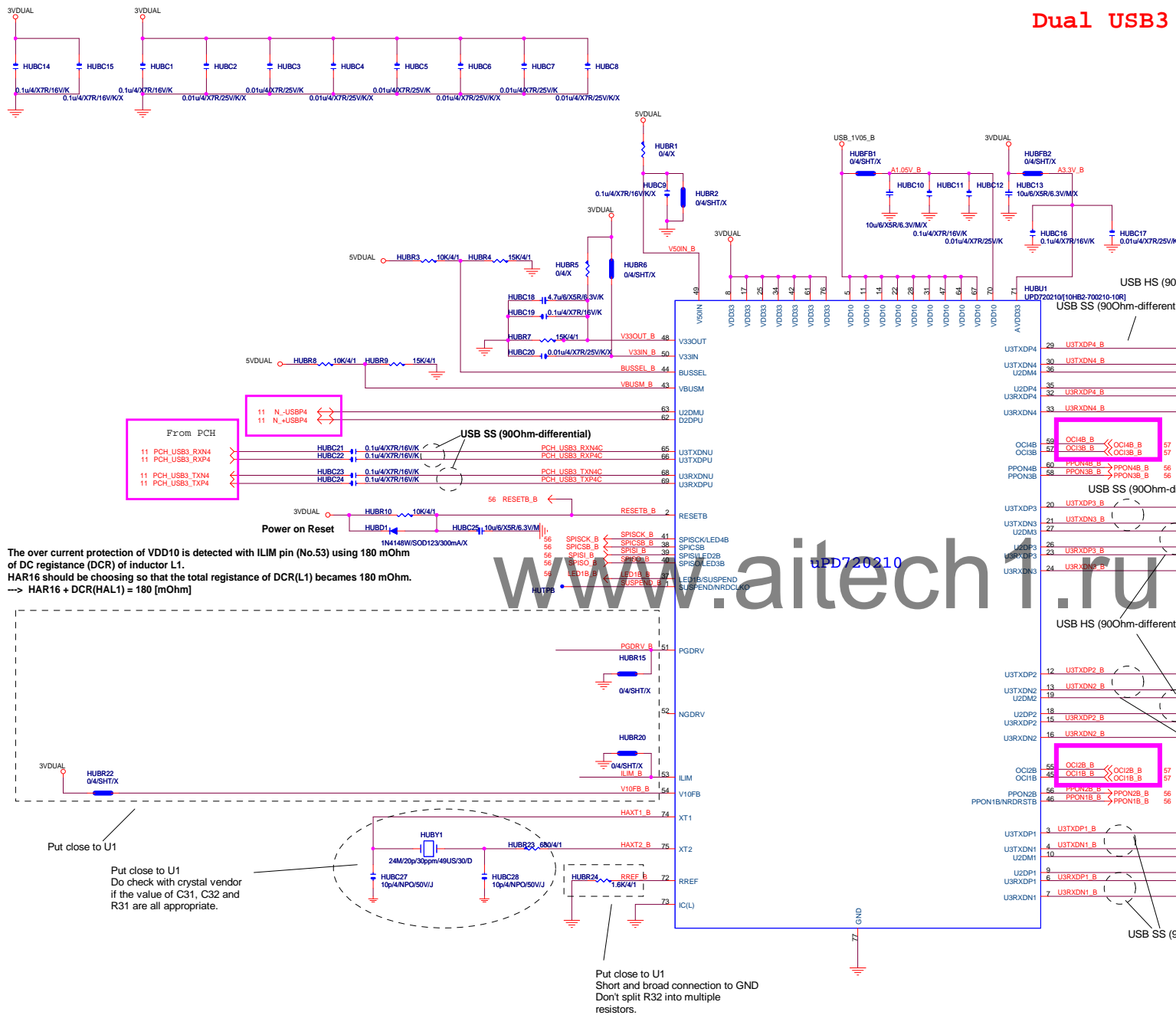


#5 VBUS Power Control ; Individual mode



PPON1B Pin Function ; Port1 PPNB mode



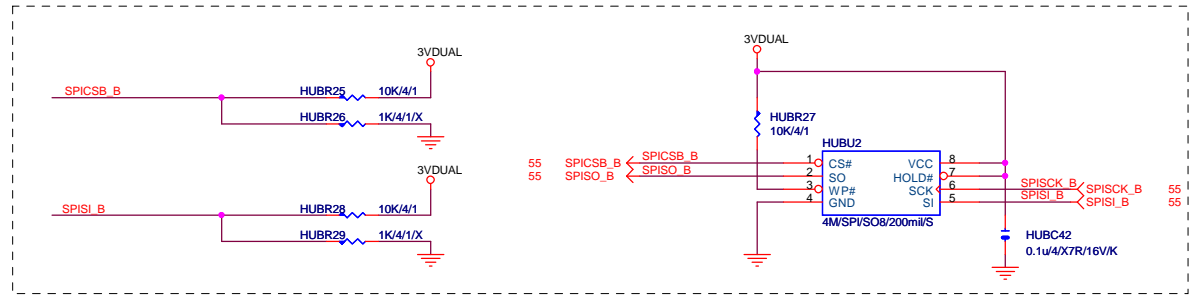


Link to Connectors
and OC circuits

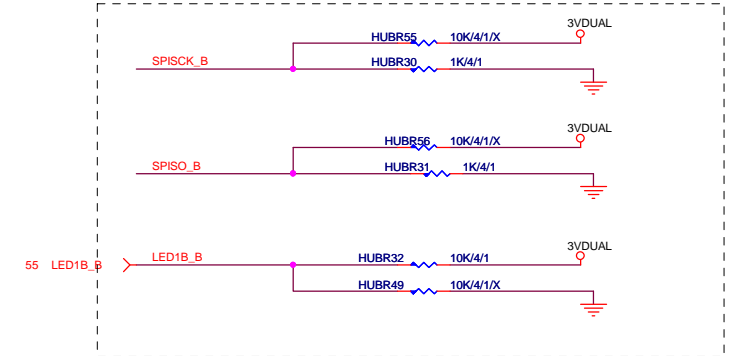
TO F_USB30_2

Dual USB3 HUB used

External SPI ROM ; SPI ROM attached mode

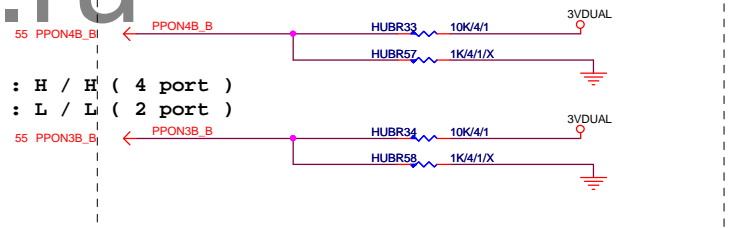


Battery Charging

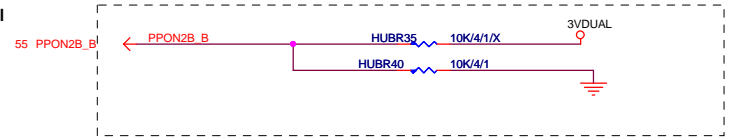


Number of Ports : 4Ports mode

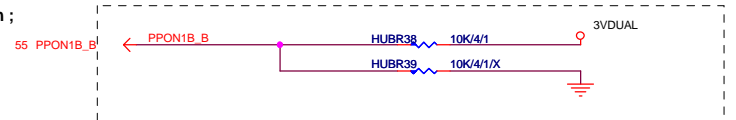
PPON3B / PPON4B : H / H (4 port)
PPON3B / PPON4B : L / L (2 port)

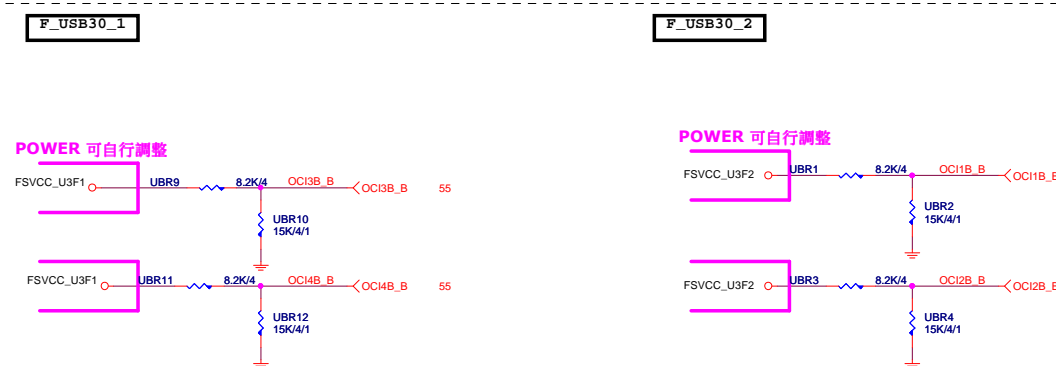
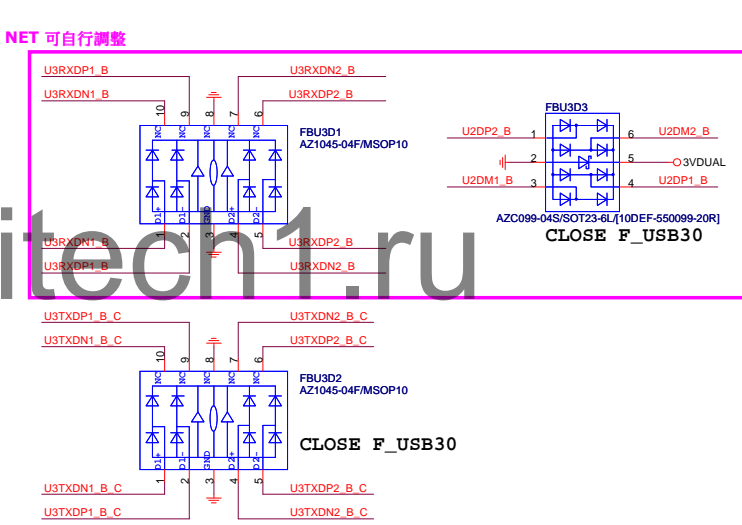
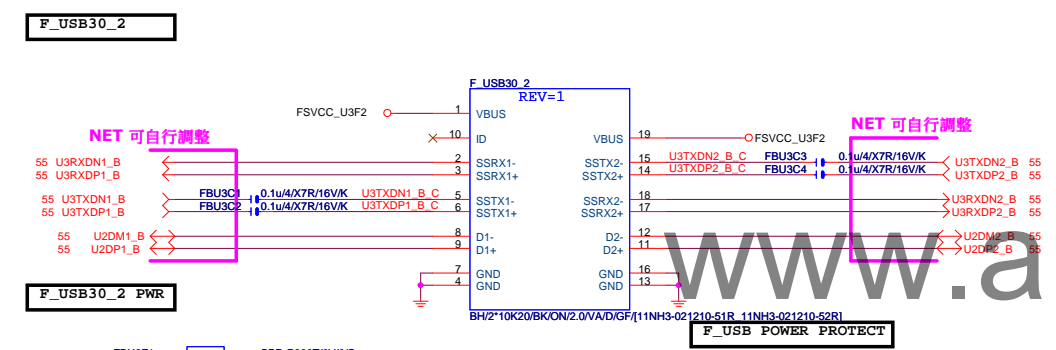
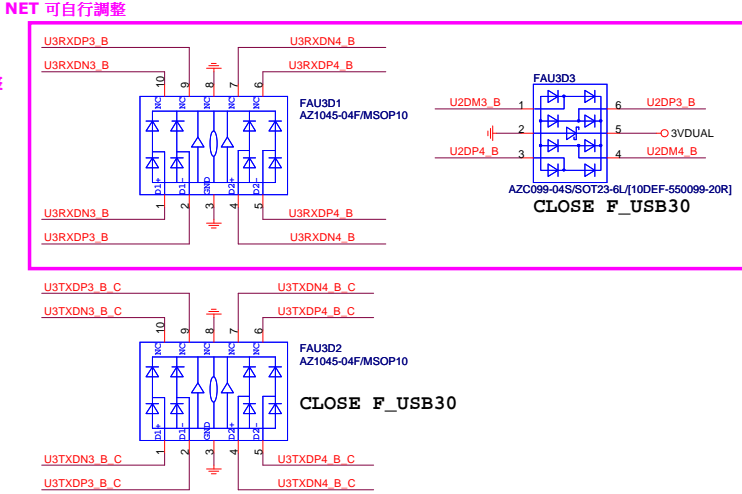
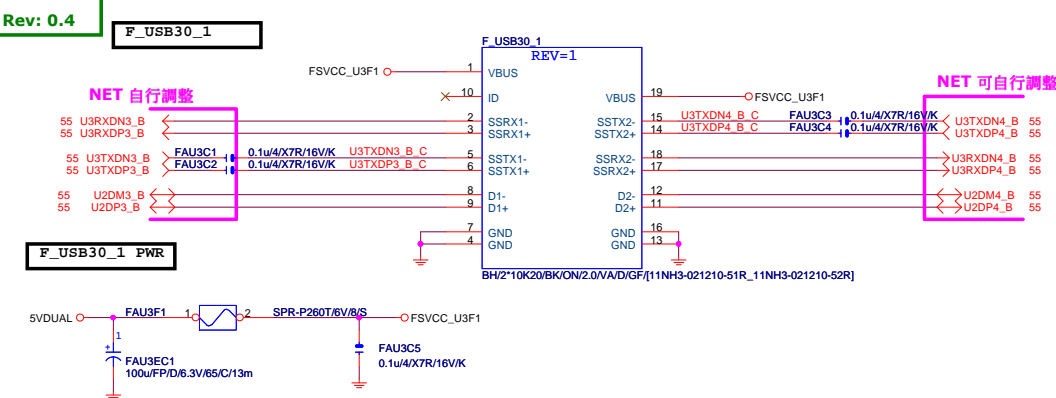


#5 VBUS Power Control ; Individual mode

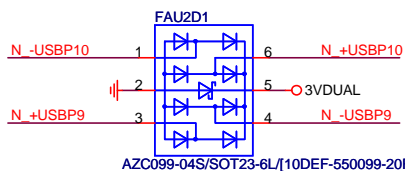


PPON1B Pin Function ; Port1 PPONB mode

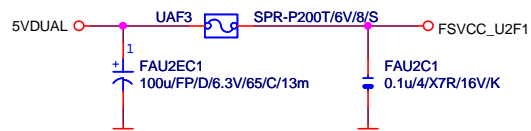




NET 可變

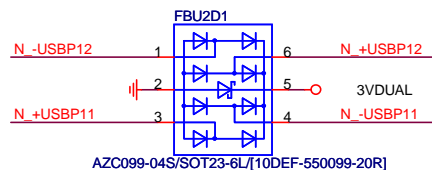


Close to connector
FUSE 2 Port 1 Fuse 2A

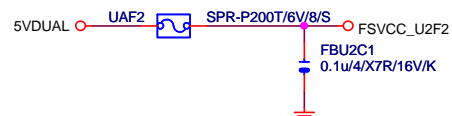


FRONT USB2

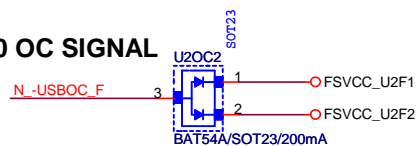
NET 可變



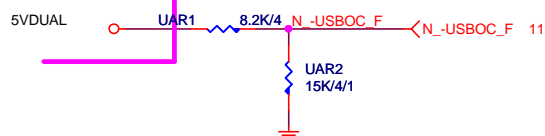
Close to connector
FUSE 2 Port 1 Fuse 2A



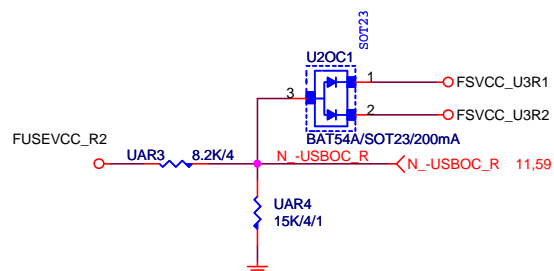
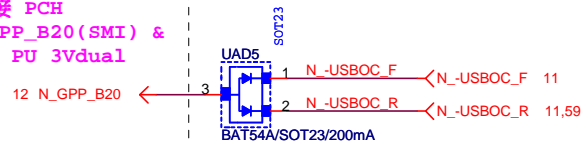
F_USB 2.0 OC SIGNAL



POWER 可自行調整



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* 接 PCH
N_GPP_B20(SMI) &
PCH PU 3Vdual
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Gigabyte Technology

Title

USB2.0

Size Custom

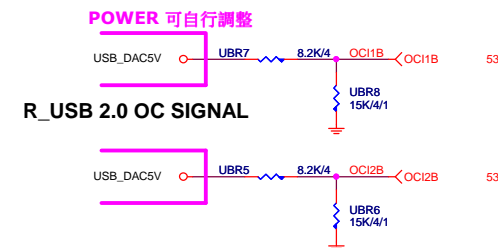
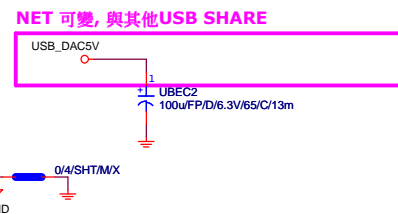
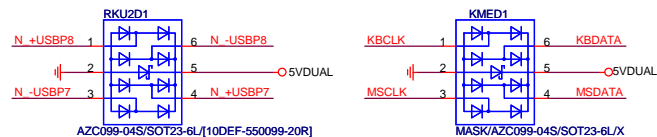
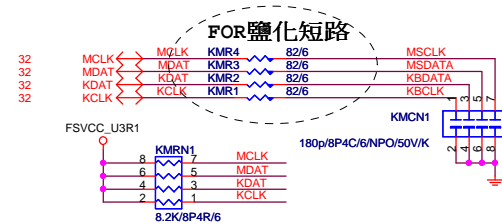
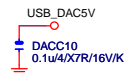
Document Number

GA-Z170X-Gaming G1

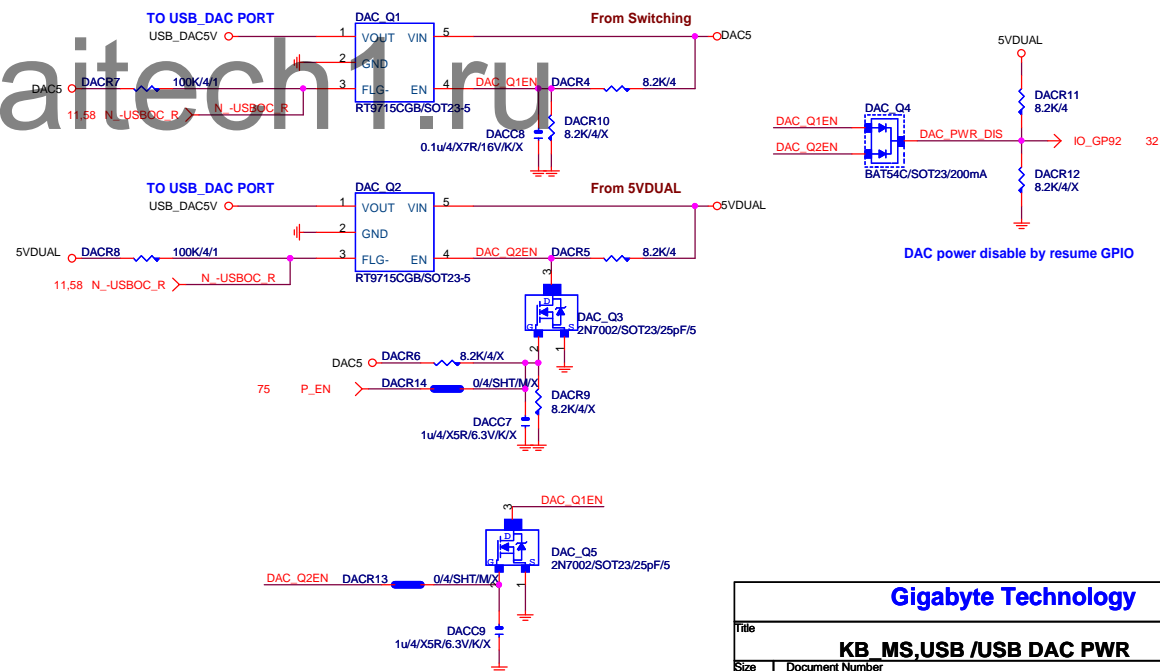
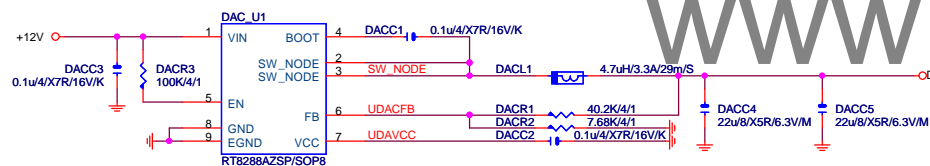
Rev	
1.0	

Date: Tuesday, July 14, 2015

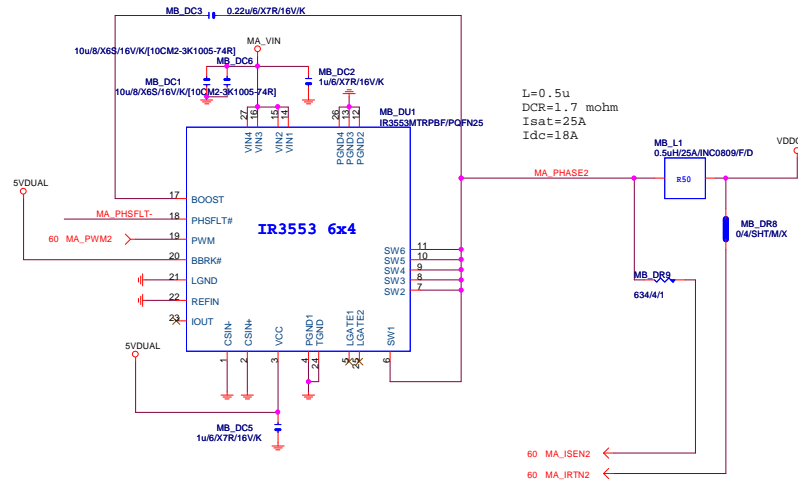
Sheet 58 of 87



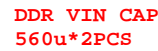
Close to connector



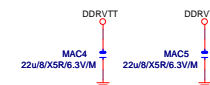
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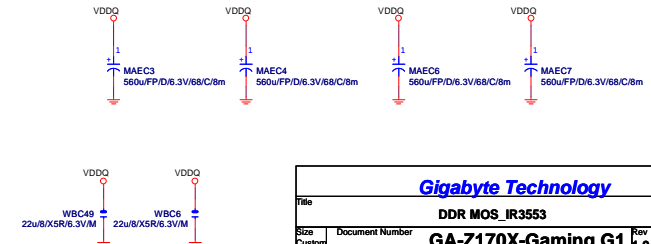
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* 大電容 x0

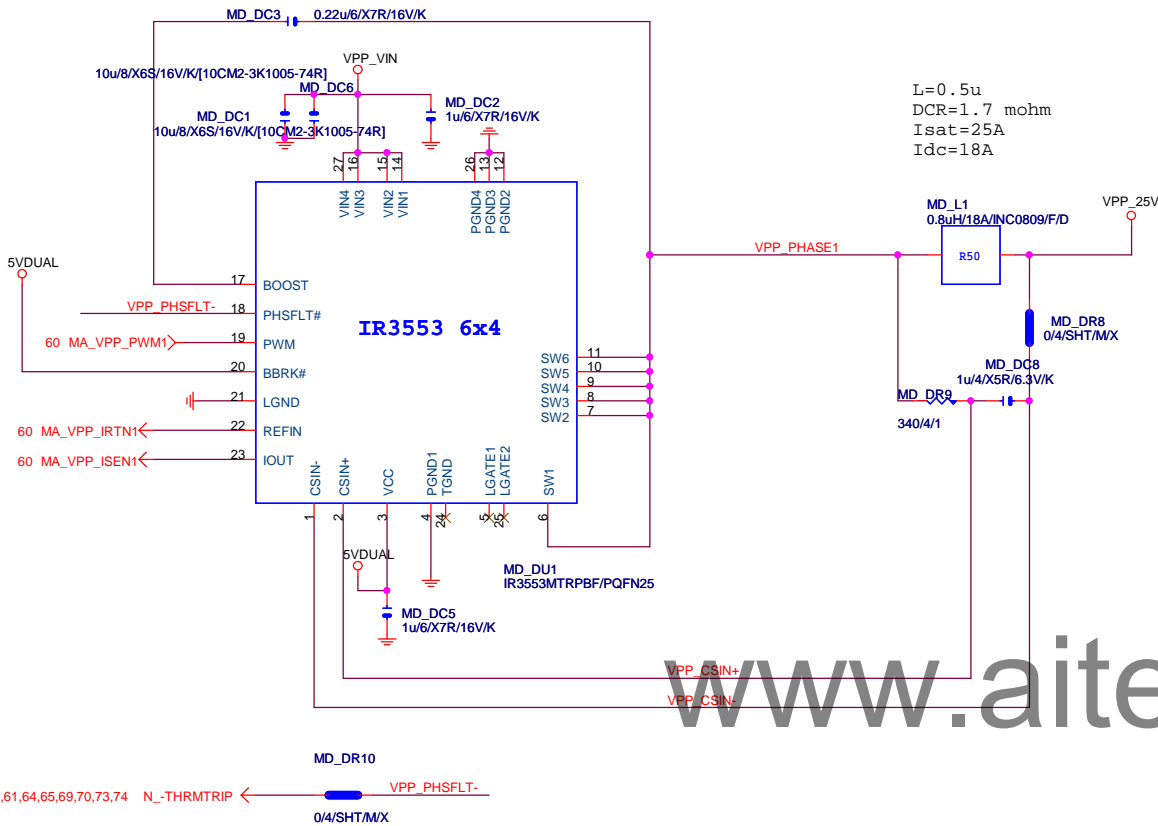


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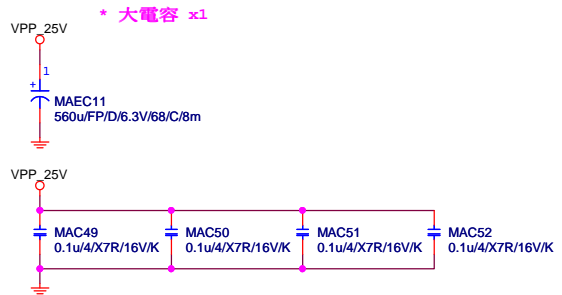
Gigabyte Technology			
DDR MOS_IR3553			
Title			
Size	Document Number	GA-Z170X-Gaming G1	Rev
Custom			1.0
Date:	Tuesday, July 14, 2015	Sheet	61 of 87

DDR_VPP REV:0.81

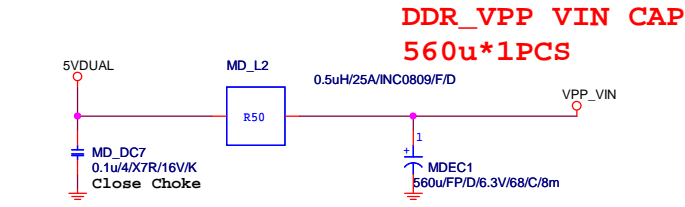


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Idc=18A

VPP CAP 560u*1PCS

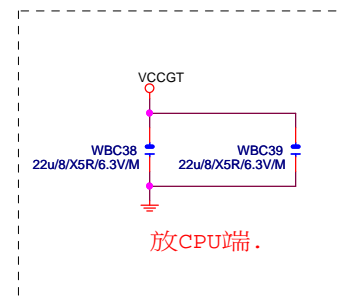
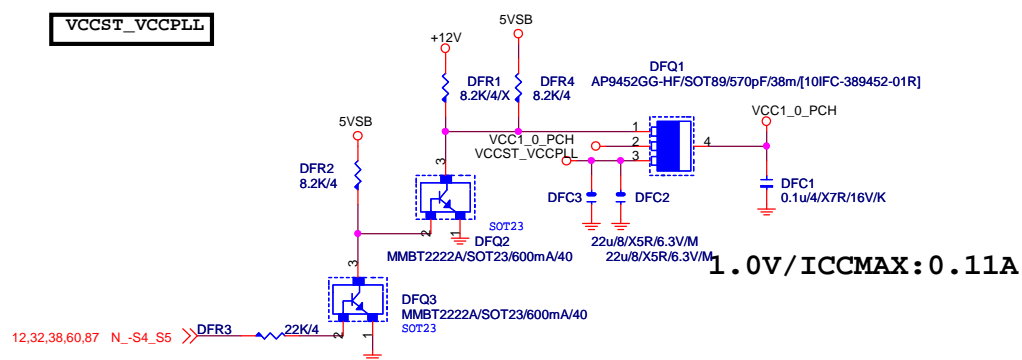


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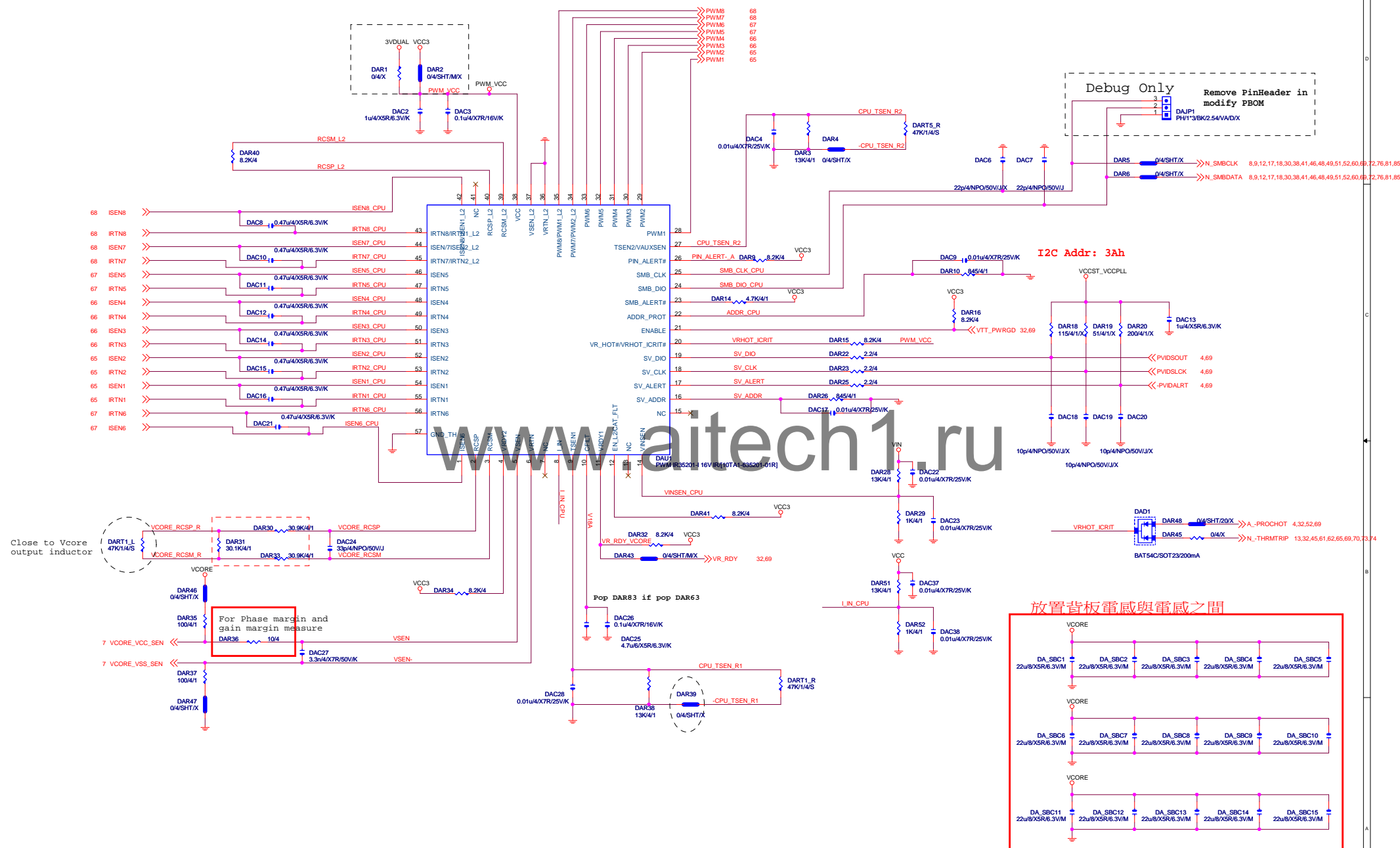


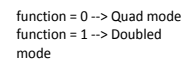
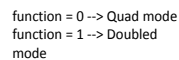
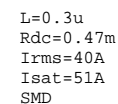
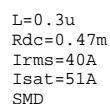
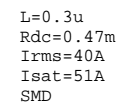
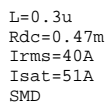
Gigabyte Technology			
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Size B	Document Number	GA-Z170X-Gaming G1	
Date:	Tuesday, July 14, 2015	Sheet	62 of 87
		Rev	1.0

REV: 0.2

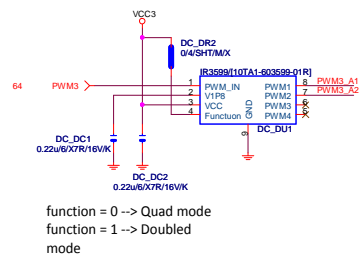
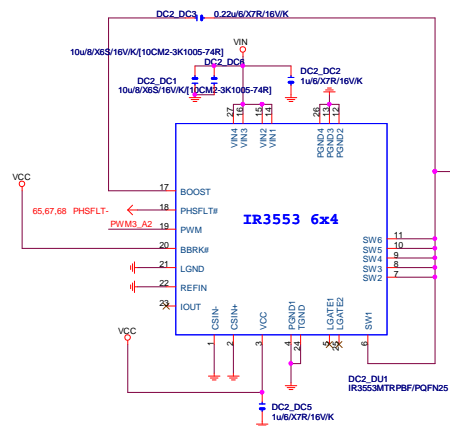
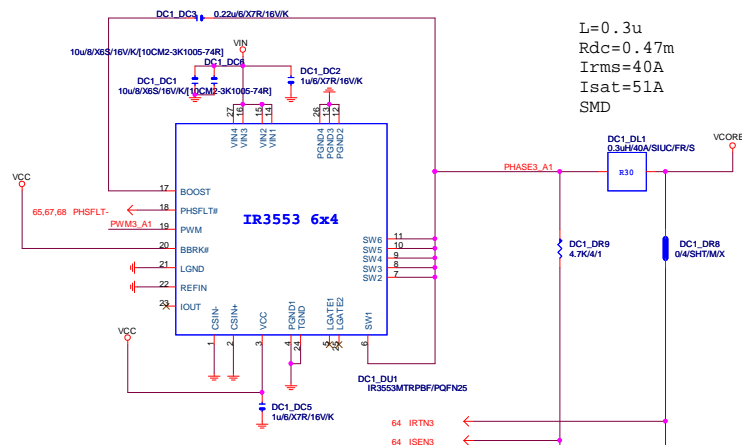


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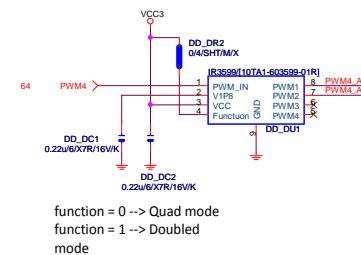
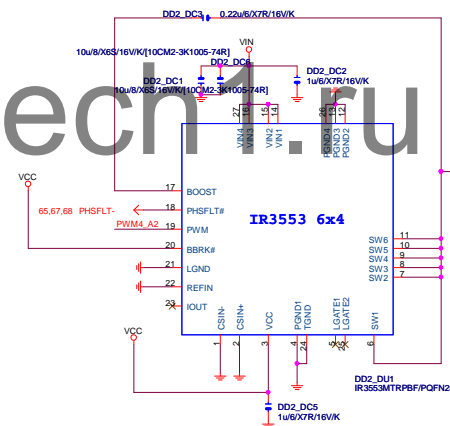
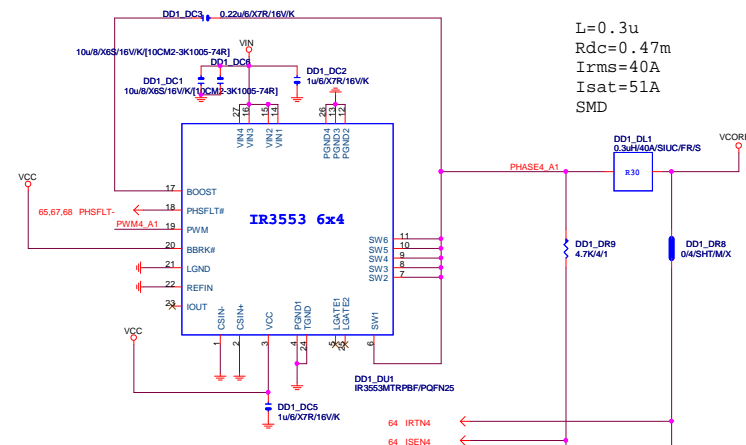


VCORE PHASE5_6

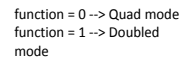
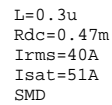
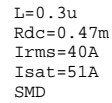


function = 0 --> Quad mode
function = 1 --> Doubled mode

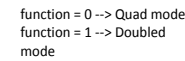
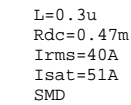
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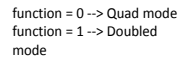
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SMD

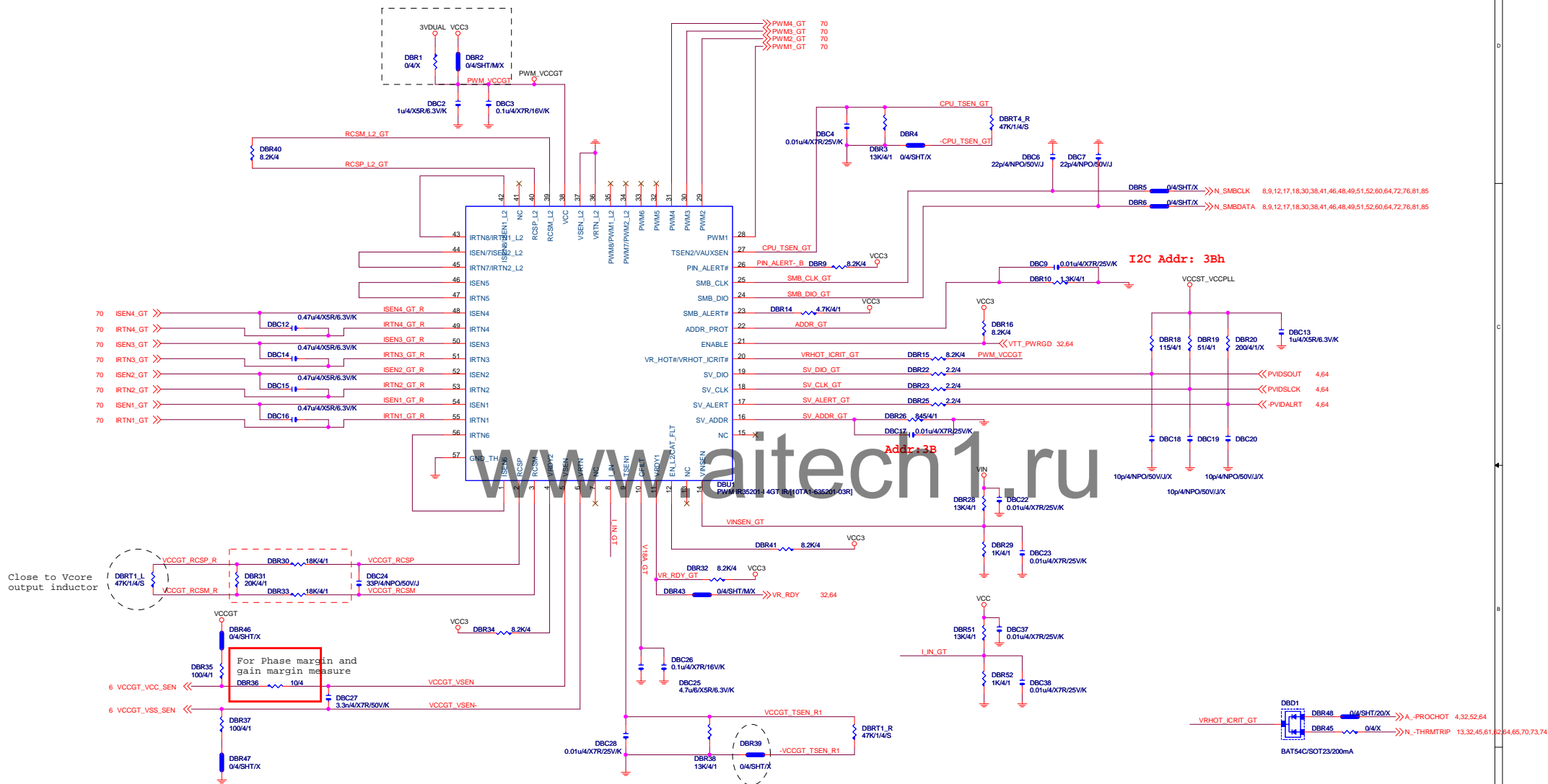


VCORE PHASE13_14

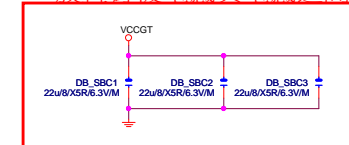


function = 0 --> Quad mode
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mode

REV:0.6

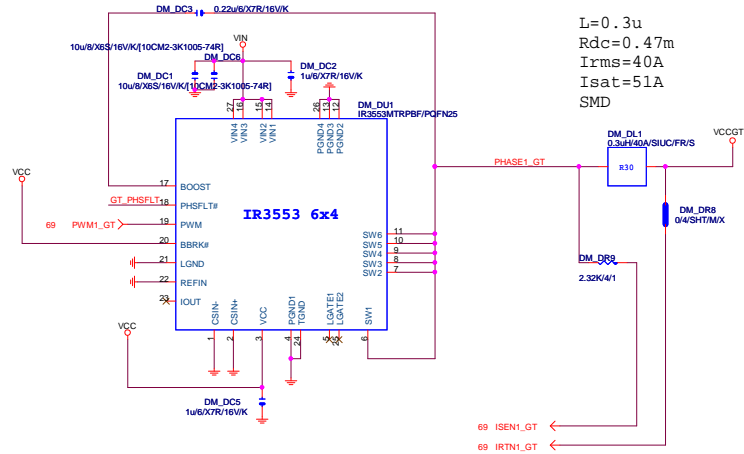


放置背板電感與電感之間

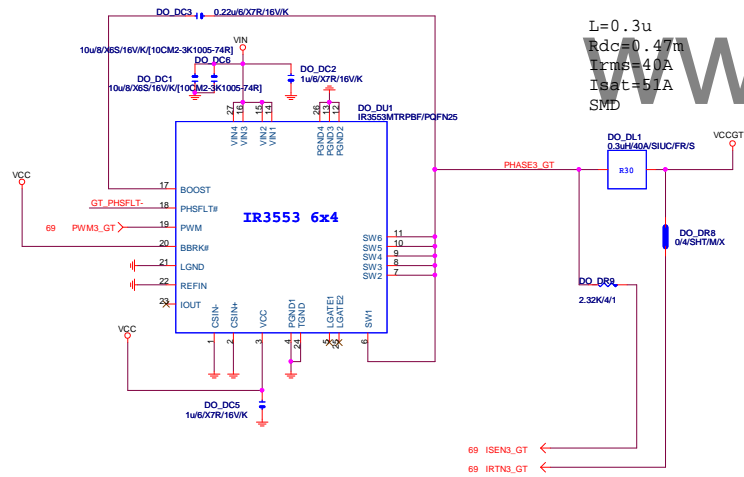


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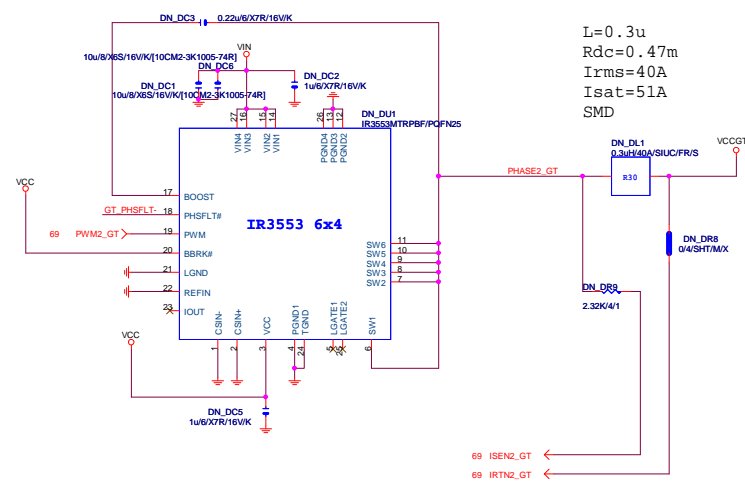
VCCGT-PHASE1



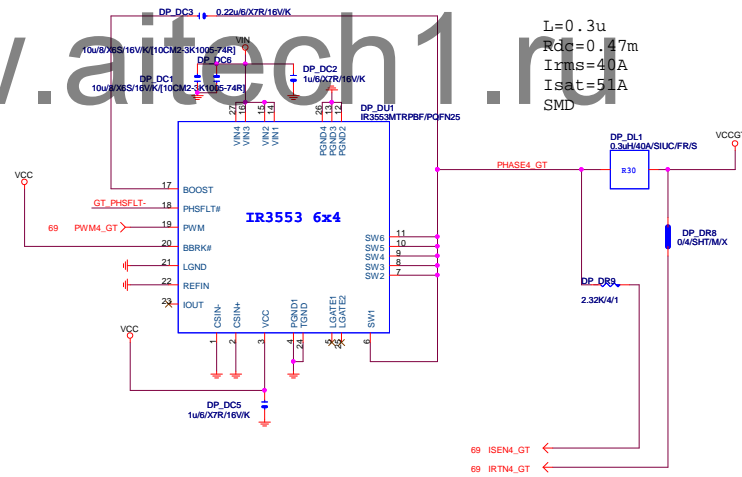
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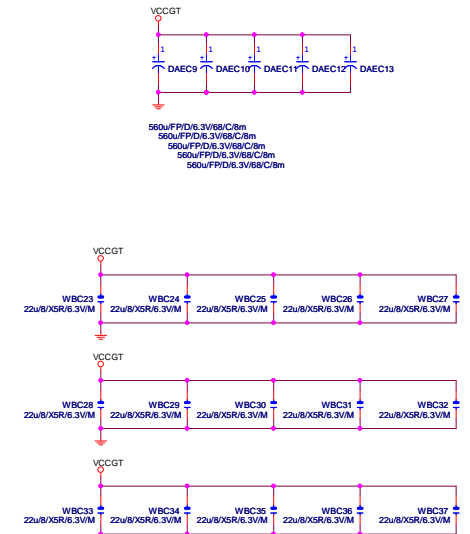
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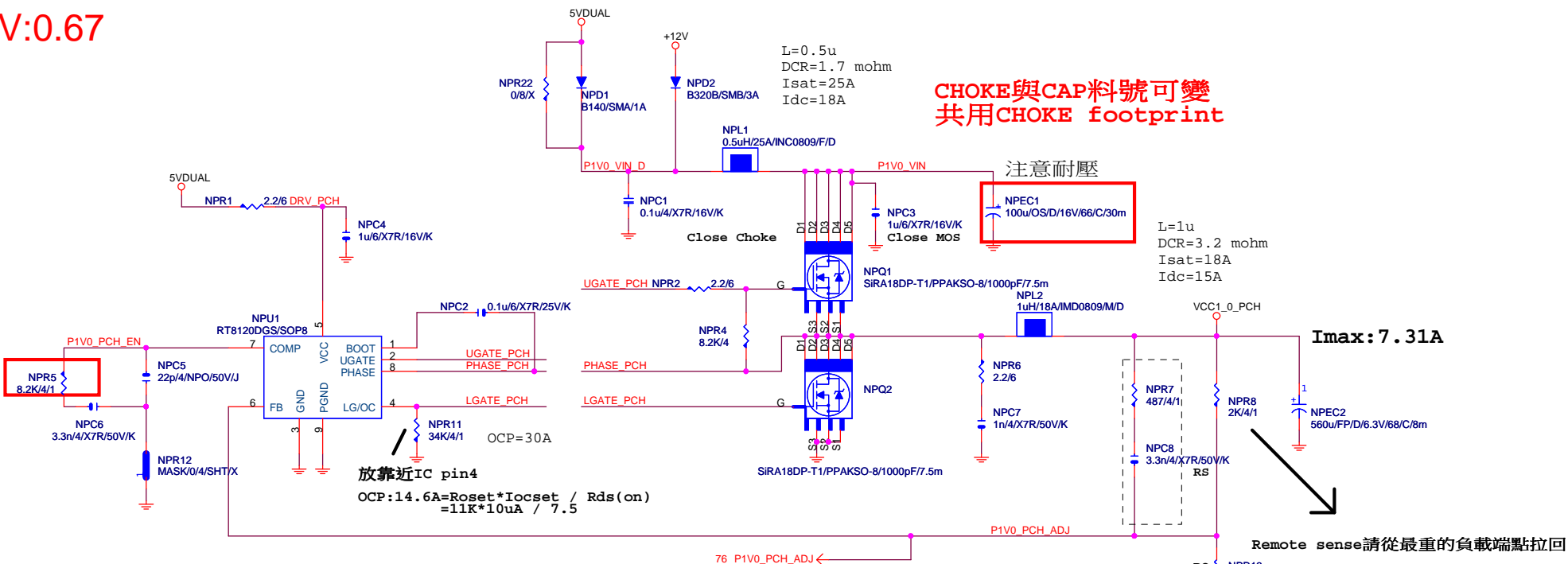
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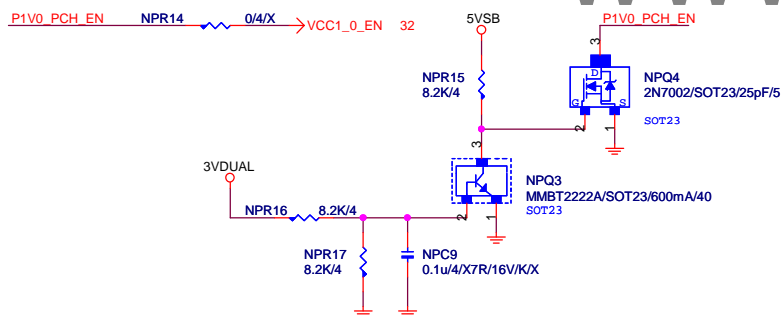
VCCGT CAP 560u*5PCS
22u*15PCS



REV:0.67



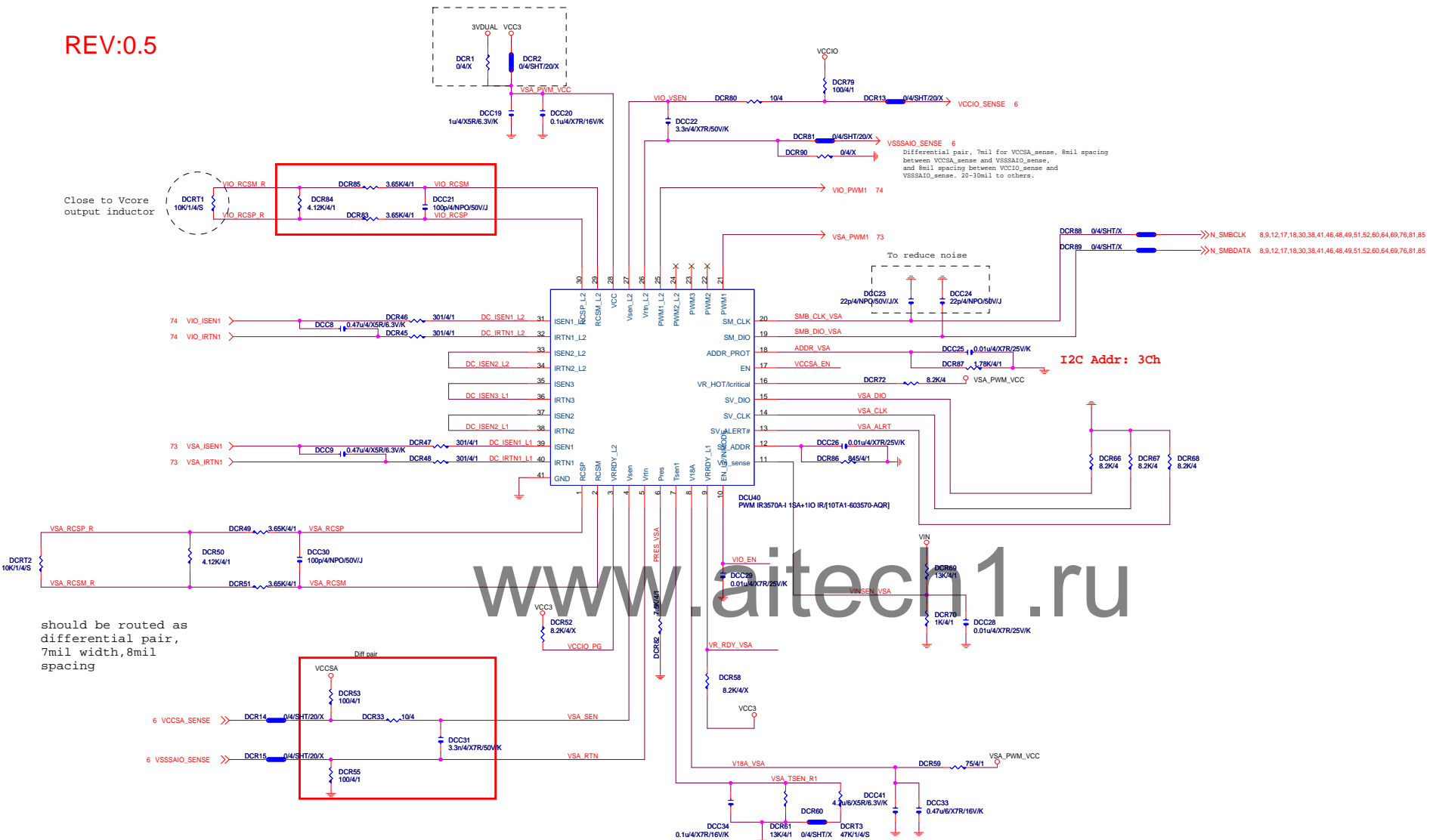
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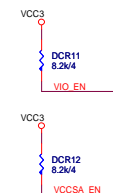
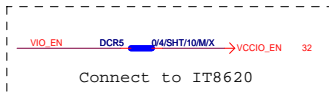
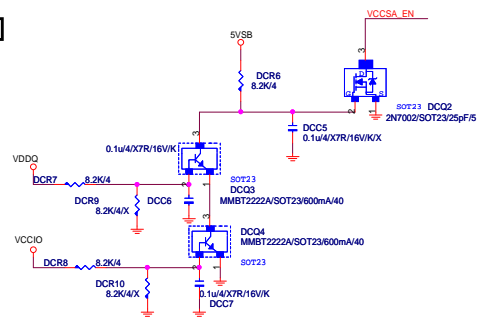
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GIGABYTE™			
Title			
RT8120_PCH POWER			
Size	Document Number	Rev	
Custom	GA-Z170X-Gaming G1	1.0	
Date:	Tuesday, July 14, 2015	Sheet	71 of 87

REV:0.5

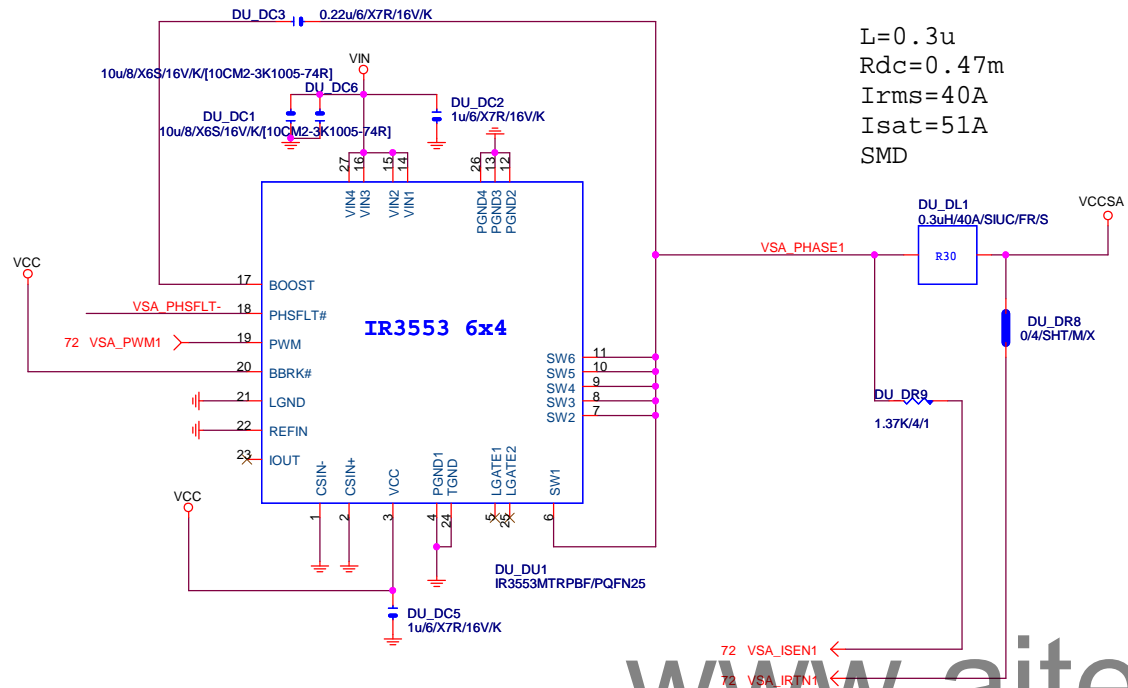


PWR_SEQ



GIGABYTE™			
Title VSA & VIO POWER IR3570			
Size	Document Number	Rev	
C	GA-Z170X-Gaming G1	1.0	
Date	Tuesday, July 14, 2015	Sheet	72 of 87

VCCSA REV:0.5

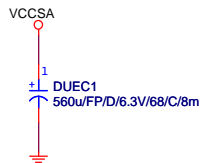


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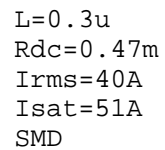
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VCCSA CAP 560u*1PCS



REV:0.5



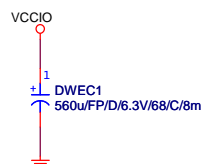
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R/16/V/K

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72 VIO_ISEN1
72 VIO_IRTN1

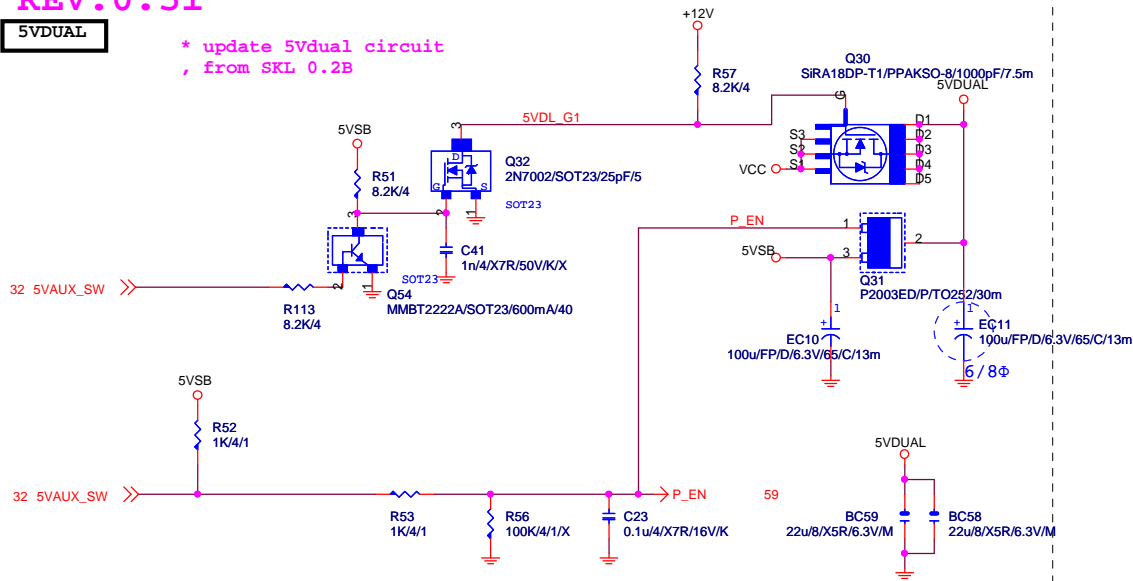
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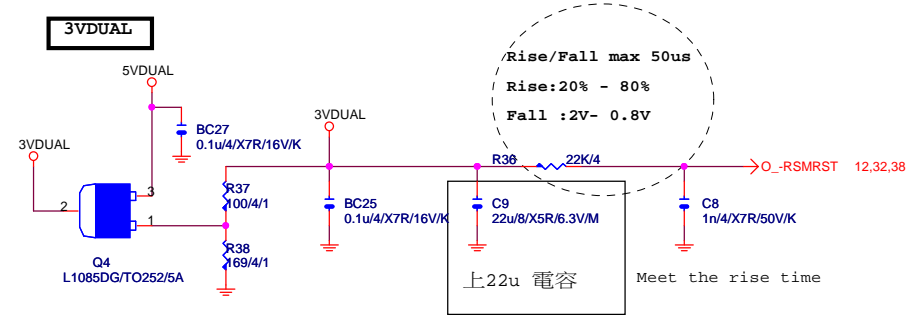
REV:0.51

5VDUAL

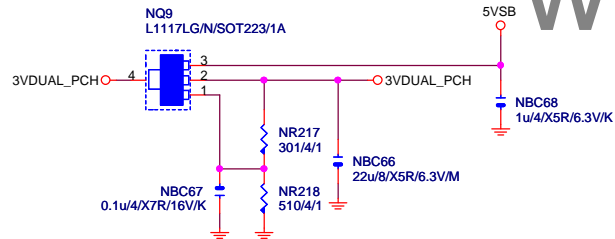
* update 5Vdual circuit
from SKL 0.2B



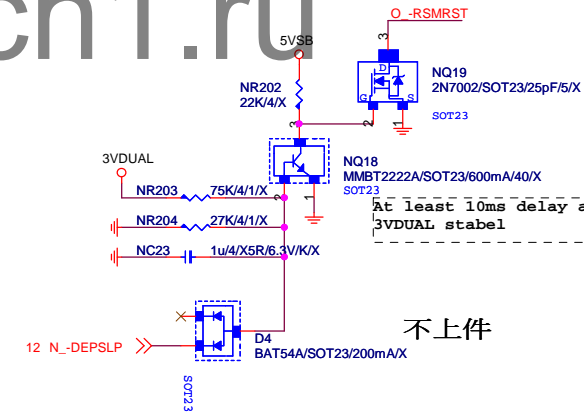
3VDUAL



3VDUAL_PCH



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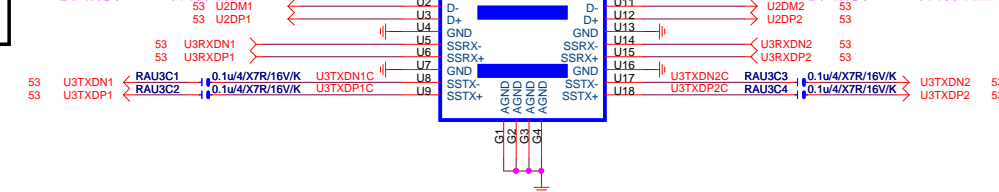


不上件

Gigabyte Technology

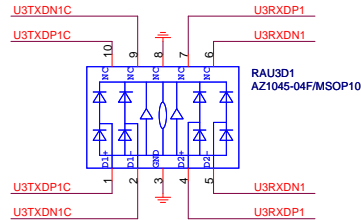
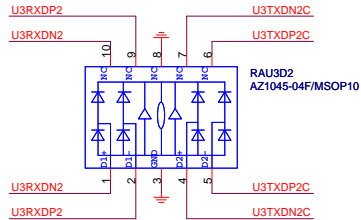
Title			
DISCRETE POWER			
Size	Document Number	GA-Z170X-Gaming G1	
Custom			Rev 1.0
Date:	Tuesday, July 14, 2015	Sheet	75 of 87

USB 電容前後NET 可自行調整

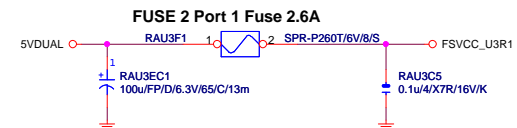
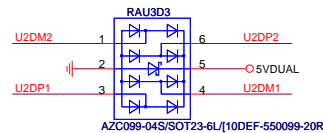


USB3.0+HD GD/18P+19P/BK/OS/RA/11NR6-H03037-11R
2 port USB 3.0 架高with HDMI Capture:
跟HDMI 用一個料號即可,鍍金

ESD 可自行SWAP PIN

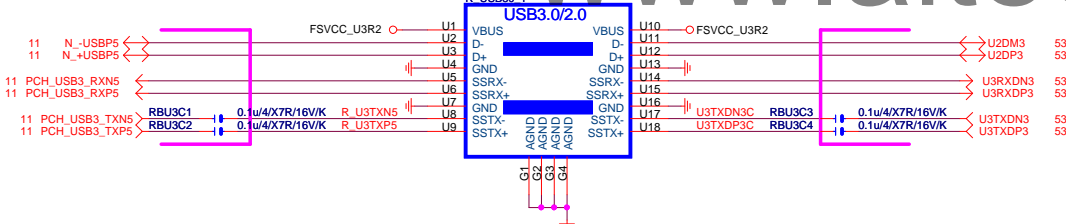


ESD 可自行SWAP PIN

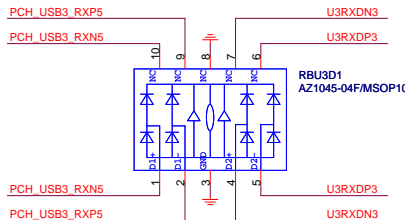
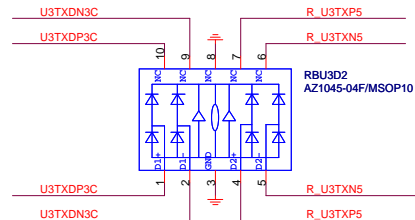


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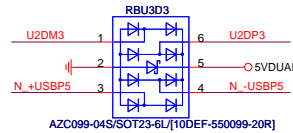
USB 電容前後NET 可自行調整



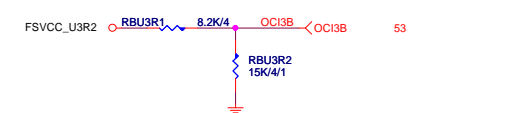
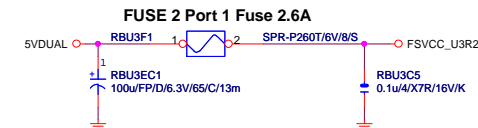
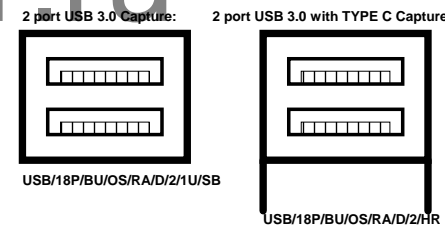
USB/18P/BU/OS/RA/D/2/HR
2 port USB 3.0 架高with TYPE C Capture:



ESD 可自行SWAP PIN



CONNECTOR 自行調整

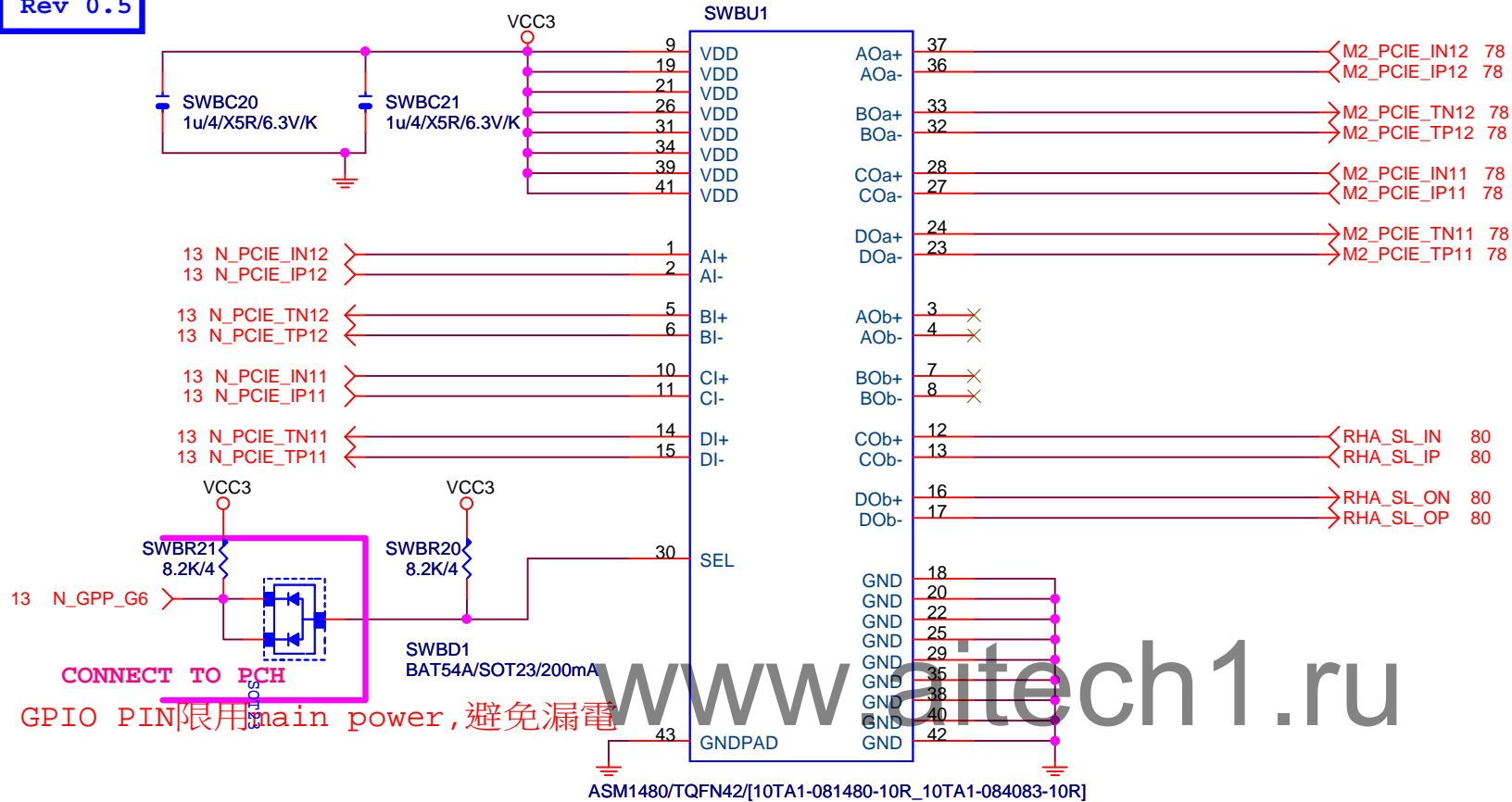


Gigabyte Technology

KB_MS_USB3, R_USB30

Size	Document Number	Rev
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Rev 0.5



Function	SEL
xI--> xOa	L
xI--> xOb	H

Gigabyte Technology

Title

PCI EXPRESS X16 SWITCH

Size
A

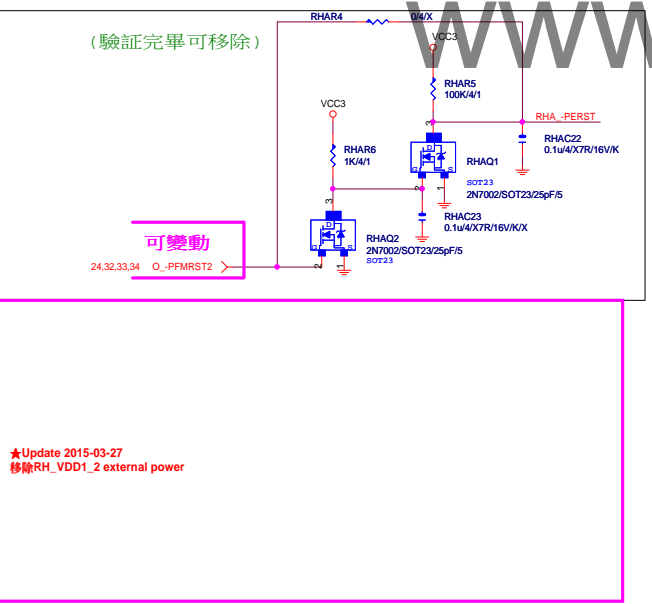
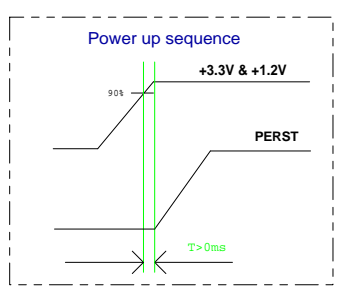
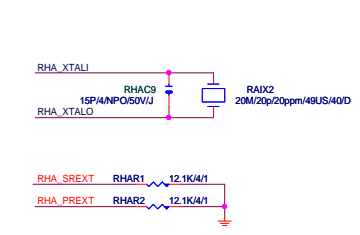
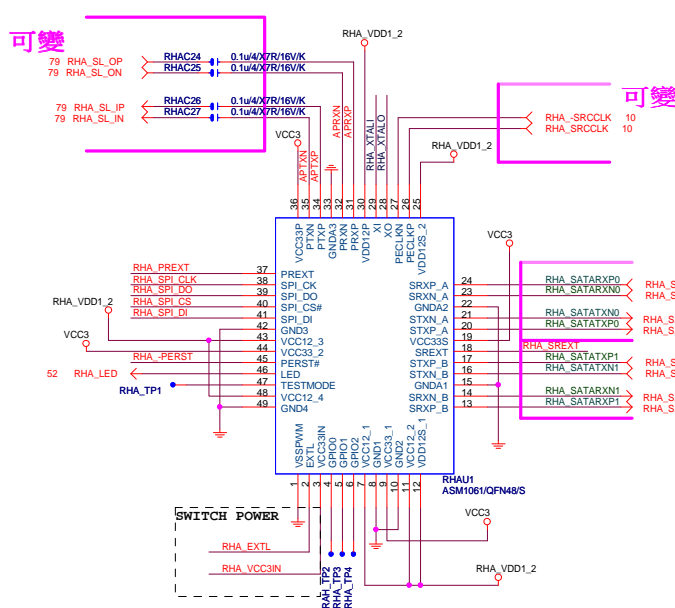
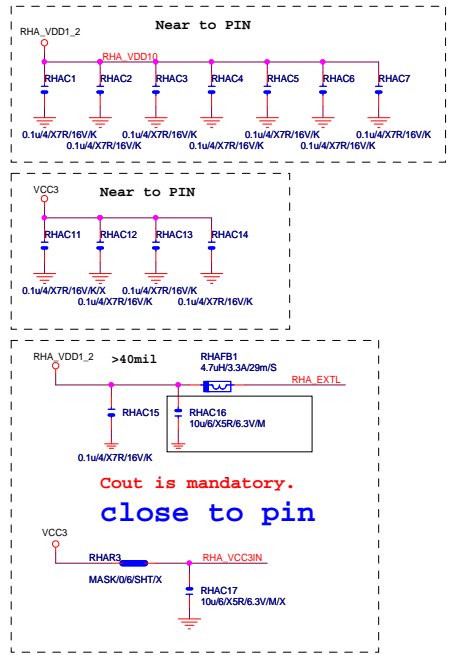
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GA-Z170X-Gaming G1

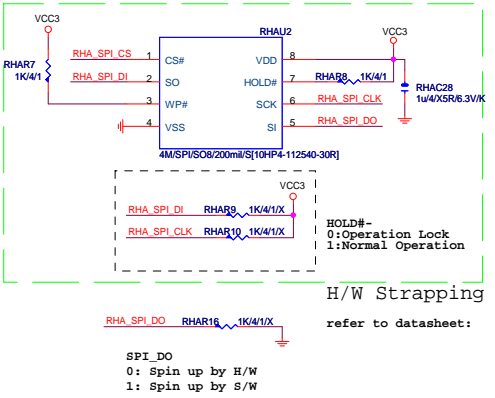
Rev
1.0

Date: Tuesday, July 14, 2015

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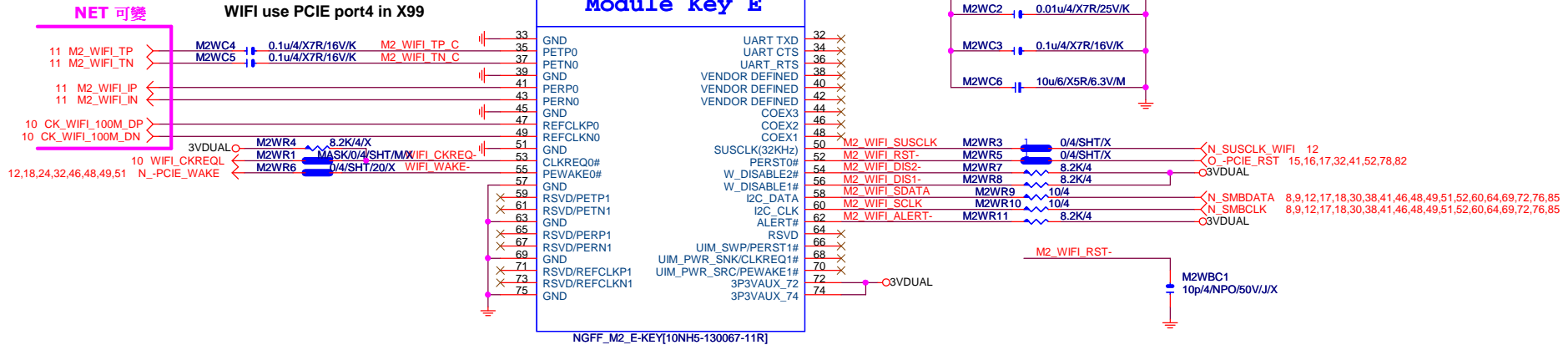


SATA EXPRESS料號
雙層:11NR6-C10236-01R
單層+2SATA:11NR6-C10236-02R
單層:11NR6-C10118-01R

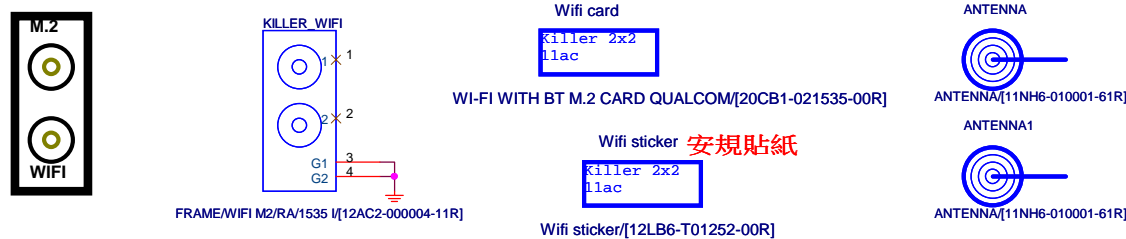
請選擇適用的USBport：
SOC/UD7/UD5/G1/G7：USB4
;UD3/G5:USB6

PCIE:15/4/4/4/15(breakout min 8/4/4/4/8)
外層Impedance=85 +- 17.5%

PCIE:15/4/4/4/15(breakout min 8/4/4/4/8)
內層 Impedance=85 +- 12%



一套WIFI MODULE包含外框+WIFI CARD+天線



Footprint WIFI-EKEY+ WIFI-EKEY-MODULE should be a package.

GIGABYTE™

Title

M2_WIFI_E_KEY

Size

Document Number

GA-Z170X-Gaming G1

Rev

1.0

Date:

Tuesday, July 14, 2015

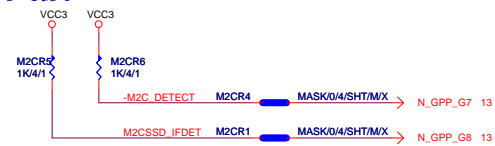
Sheet

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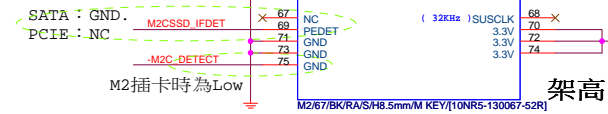
87

87

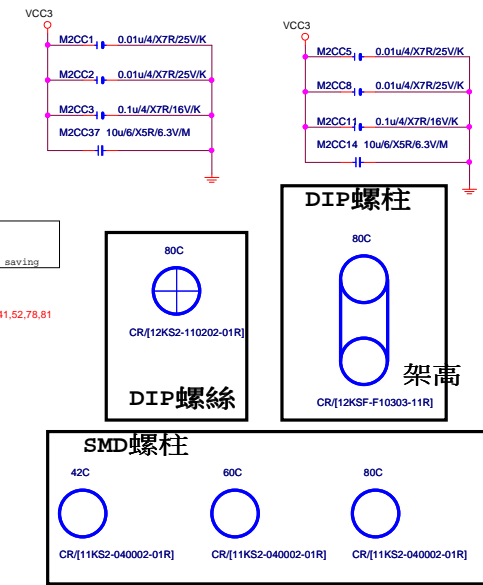
支援SATA and M.2 function



需與M2_-CLKREQ對應



架高



Model Name				Z1704X-Gaming G1 1.0 (No Alpine Ridge)		
IO26	P20		X4	IRST	X4 M.2 slot (SATA mode from IO23/SATA 4 (switch with 2 SATA ports below)	
IO25	P19					
IO24	P18	S6				SATA 6 (文字面寫SATA 3)
IO23	P17	S4				SATA 4 (文字面寫SATA 5)
IO22	P16	S3	X4	IRST	SATA 3 (文字面寫SATA 1)	
IO21	P15	S2				SATA 2 (文字面寫SATA 0)
IO20	P14	S1				SATA 1 (文字面寫SATA 2)
IO19	P13	S0 Gbe				SATA 0 (文字面寫SATA 4)
IO18	P12	Gbe	X4	IRST	x4 M.2 slot switch with ASM106SE (When both occupy bandwidth = x2 + x2) (SATA mode from IO15/SATA 0) (At PCIe mode, IO19/SATA0 enable)	
IO17	P11					
IO16	P10	S1				
IO15	P9	S0 Gbe				
IO14	P8		X4	X2	USB 3.1 (ASM1142)	
IO13	P7					
IO12	P6			X2	USB 3.1 (ASM1142)	
IO11	P5	Gbe				

M.2-SATA+SATA S5

WHEN	PCH GPIO	SETUP	SWITCH
GPP_G7	L	GPP_C12	H
GPP_G8	L	GPP_C14	L
GPP_F1/F2	H (SATA)	GPP_C13	H
		GPP_C15	L

M. 2X4

WHEN	PCH GPIO	SETUP	SWITCH
GPP_G7	L	GPP_C12	H
GPP_G8	H	GPP_C14	H
GPP_F1/F2	H	GPP_C13	H
		GPP_C15	L

M.2-SATA+S.E.

WHEN	PCH GPIO	SETUP	SWITCH
GPP_G7	L	GPP_C12	H
GPP_G8	L	GPP_C14	L
GPP_F1/F2	L (S.E.)	GPP_C13	H
		GPP_C15	L

M. 2X2+S. E.

WHEN	PCH GPIO	SETUP	SWITCH
GPP_G7	L	GPP_C12	L
GPP_G8	H	GPP_C14	L
GPP_F1/F2	L	GPP_C13	L
		GPP_C15	H

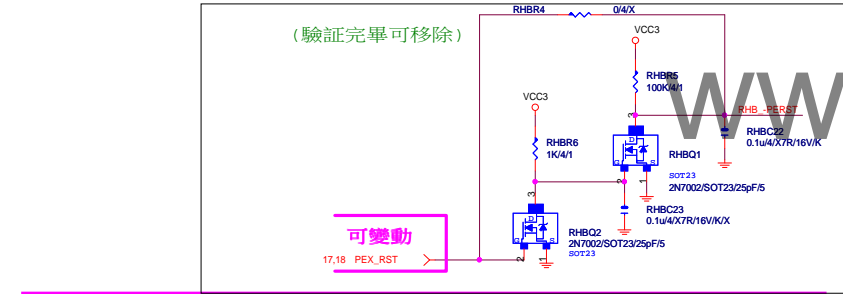
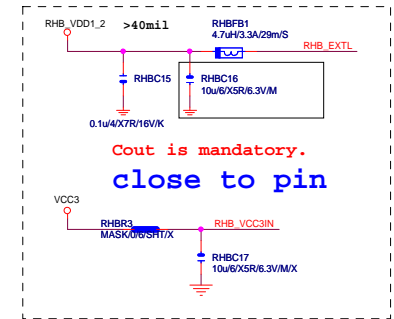
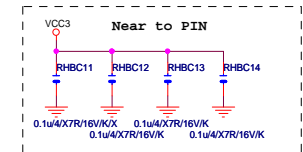
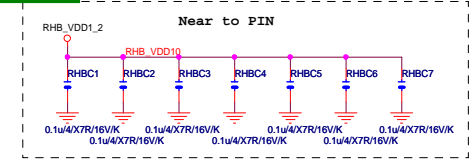
M.2沒插卡+SATA S4&S5

WHEN	PCH GPIO	SETUP	SWITCH
GPP_G7	H	GPP_C12	L
GPP_G8	H	GPP_C14	L
GPP_F1/F2	H	GPP_C13	L
		GPP_C15	H

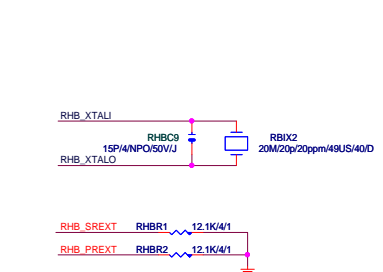
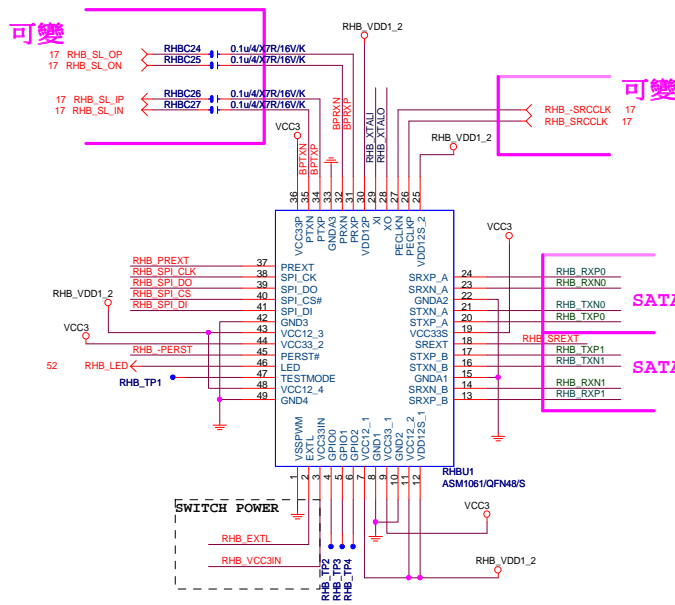
M.2沒插卡+S.E.

WHEN	PCH GPIO	SETUP	SWITCH
GPP_G7	H	GPP_C12	L
GPP_G8	H	GPP_C14	L
GPP_F1/F2	L	GPP_C13	L
		GPP_C15	H

M.2 有插卡 / 沒插卡 GPP_G9	M.2插何種卡? GPP_G10	SATA Express 插何種硬碟? GPP_E0/E1/E2/F0	IO23 (S4)	IO24 (S5)	IO25	IO26
有插卡 (Low)	SATA Mode (Low)	SATA (Hi)	SATA (For M2)	SATA (S5)	PCIEx2	
		SATA Express (Low)	SATA (For M2)	SATA (S5)	PCIEx2	
	PCIe Mode (Hi)	SATA (Hi)	PCIEx4 (For M.2)			
		SATA Express (Low)	SATA Express (For S.E.)		PCIEx2 (For M.2)	
沒插卡 (Hi)	Don't Care (Hi)	SATA (Hi)	SATA (S4)	SATA (S5)	PCIEx2	
		SATA Express (Low)	SATA Express (For S.E)		PCIEx2	

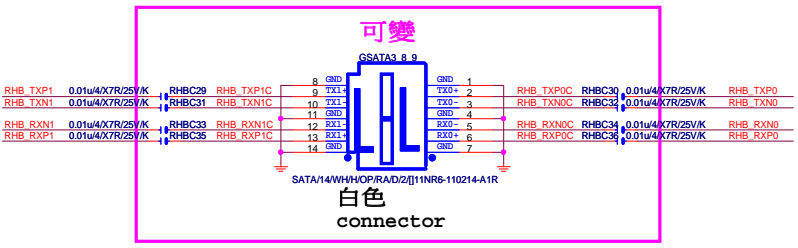


★Update 2015-03-27
移除RH_VDD1_2 external power

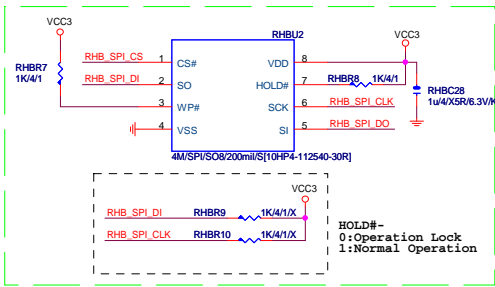


SATA PORT 0

SATA PORT 1



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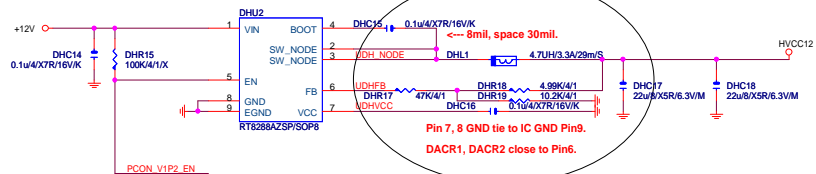


H/W Strapping
refer to datasheet:

SPI_DO
0: Spin up by H/W
1: Spin up by S/W

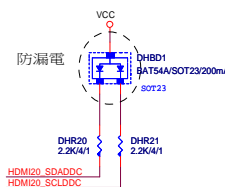
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Title			
ASM1061			
Size			
Document Number			
Custkm			
GA-Z170X-Gaming G1			
Rev			
1.0			
Date			
Tuesday, July 14, 2015			
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Rev:1.09



PCH端

10 N_DDPD_CTRLCLK ↔ N_DDPD_CTRLCLK DHR23 2.2K/4/1 → VCC3
 10 N_DDPD_CTRLDATA ↔ N_DDPD_CTRLDATA DHR24 2.2K/4/1 → VCC3



Power 可變

FSVCC_U3R1

HDMI20_SCLDDC

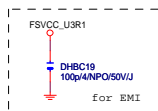
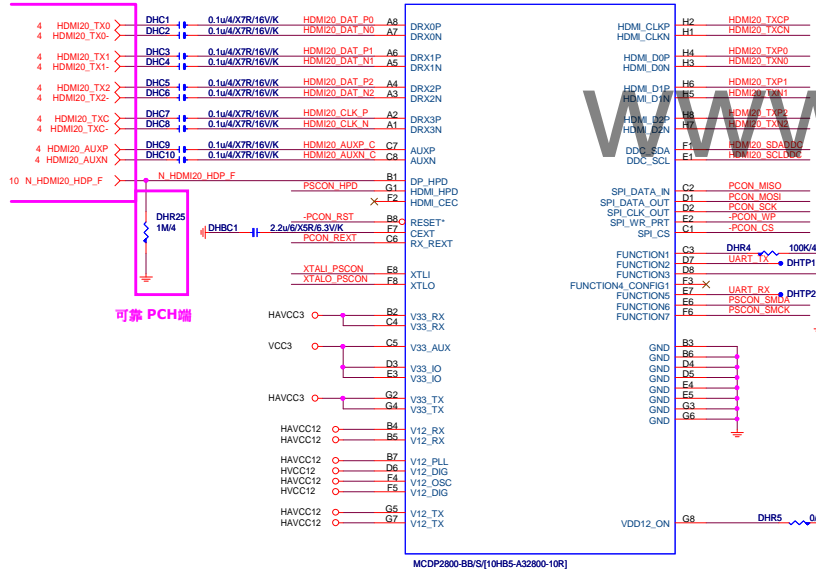
HDMI20_SCLDDC

HDMI20_PLUG

HDMI20_PLUG

橫轉式/直立式 可自行調整

跟R_USB30 用一個料號即可,鍍金

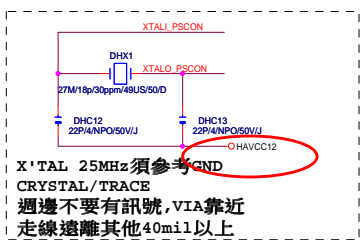
需設定為DP Port
NET 可變

可靠 PCH端

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F/W 請用 for -BB 版本

PCON_SMDA DHR8 0.4/4X ↔ N_SMBDATA 8.9,12,17,18,30,38,41,46,48,49,51,52,60,64,69,72,76,81
 PCON_SMCK DHR9 0.4/4X ↔ N_SMBCLK 8.9,12,17,18,30,38,41,46,48,49,51,52,60,64,69,72,76,81



X'TAL 25MHz 須參考 GND
 CRYSTAL/TRACE
 週邊不要有訊號, VIA 靠近
 走線遠離其他 40mil 以上

Gigabyte Technology

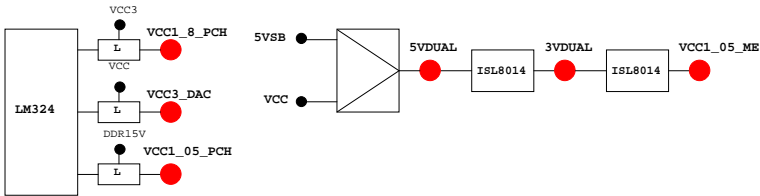
HDMI20 MCDP2800-BA			
Title	Document Number	Rev	1.0
Size	GA-Z170X-Gaming G1		
Date	Tuesday, July 14, 2015	Sheet	85 of 87

PCH GPIO LIST TABLE					
PIN NAME	PWR	Default	USAGE	NOTE	
GP0	MAIN	H-Z	GPI	-PECI_REQ	N/A
GP1/TACH1	MAIN		GPI	ICH_FAN_TACH1	N/A
GP2/PIRQE#	MAIN		GPI	-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN		GPI	-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN		GPI	-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN		GPI	-PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN		GPI	ICH_FAN_TACH2	N/A
GP7/TACH3	MAIN		GPI	ICH_FAN_TACH3	N/A
GP8	STBY	H	GPO	GPIO8	P/U 8.2K 3VDUAL
GP9/OC5#	STBY		NATIVE	OC5#	N/A
GP10/OC6#	STBY		NATIVE	OC6#	N/A
GP11/SMBALERT#	STBY		NATIVE	-SMBALERT	P/U 8.2K 3VDUAL
GP12	STBY	L	GPI	LAN_PHY_PWR_CTRL	P/U 8.2K 3VDUAL
GP13	STBY	L	GPI	GPIO13	P/U 8.2K 3VDUAL
GP14/OC7#	STBY		NATIVE	OC7#	N/A
GP15	STBY	L	GPO	GPIO15	N/A
GP16	MAIN		GPI	-SKTOCC	P/U 8.2K VCC3
GP17/TACH0	MAIN		GPI	ICH_FAN_TACH0	N/A
GP18	MAIN		NATIVE	MB_ID0	P/D 8.2K GND
GP19	MAIN		GPI	-LAN1_ISO	P/U 8.2K VCC3
GP20	MAIN		NATIVE	LED_CTL	P/U 1K VCC3
GP21	MAIN		GPI	VCC18_PCH_OV2	P/U 8.2K VCC3
GP22	MAIN	H-Z	GPI	VCORE_OV3	P/U 8.2K VCC3
GP23	MAIN		NATIVE	-LDRQ1	P/U 8.2K VCC3
GP24	STBY	L	GPO	TLS	P/U 8.2K 3VDUAL
GP25	STBY		NATIVE	-CPU_STOP	P/U 8.2K 3VDUAL
GP26	STBY		NATIVE	-AC2_DET	P/U 8.2K 3VDUAL
GP27	STBY	H	GPO	GPIO27	P/U 8.2K 3VDUAL
GP28	STBY	H	GPO	GPIO28	P/U 8.2K 3VDUAL
GP29	STBY	L	GPI	GPIO29	N/A
GP30	STBY	H-Z	GPI	S_PWR_ACK	P/U 100K 3VDUAL
GP31	STBY	H-Z	GPI	N/A(Reverse)	P/U 8.2K VCC3
GP32	MAIN	H	GPO	MB_ID1	P/D 8.2K GND
GP33	MAIN	H	GPO	LOAD-LINE	P/U 1K VCC3
GP34	MAIN	H-Z	GPI	-PCI_STOP	P/U 8.2K VCC3
GP35	MAIN	L	GPO	GPIO35	P/U 8.2K VCC3
GP36	MAIN		GPI	-LAN1_DSM	P/U 8.2K VCC3
GP37	MAIN		GPI	N/A	P/U 8.2K VCC3
GP38	MAIN	H-Z	GPI	VCORE_OV2	P/U 8.2K VCC3
GP39	MAIN	H-Z	GPI	-LAN_DSM	P/U 8.2K VCC3
GP40	STBY		NATIVE	OC1#	N/A
GP41	STBY		NATIVE	OC2#	N/A
GP42	STBY		NATIVE	OC3#	N/A
GP43	STBY		NATIVE	OC4#	N/A
GP44	STBY	L	NATIVE	N/A	P/U 8.2K 3VDUAL
GP45	STBY		NATIVE	-LPCPME	P/U 8.2K 3VDUAL
GP46	STBY	L	NATIVE	PWR_LED	P/U 8.2K 3VDUAL
GP47	STBY		NATIVE	PSI_LED	P/U 8.2K 3VDUAL
GP48	MAIN	H-Z	IN	EN_PWM	P/U 8.2K VCC3
GP49	MAIN	H-Z	IN	VCC18_OV1	P/U 8.2K VCC3
GP50	MAIN		NATIVE	-REQ1	P/U 2.2K VCC
GP51	MAIN	H	NATIVE	-GNT1	N/A
GP52	MAIN		NATIVE	-REQ2	P/U 2.2K VCC
GP53	MAIN	H	NATIVE	-GNT2	N/A
GP54	MAIN		NATIVE	-REQ3	P/U 2.2K VCC
GP55	MAIN	H	NATIVE	-GNT3	N/A
GP56	STBY		NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL
GP57	STBY	H-Z	IN	VCORE_OV1	P/U 8.2K 3VDUAL
GP58	STBY	H-Z	NATIVE	F_USB_OC	P/U 8.2K 3VDUAL
GP59	STBY		NATIVE	USB_OC0#	N/A
GP60	STBY	H-Z	NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL
GP61	STBY	L	NATIVE	-SUSTAT	N/A
GP62	STBY	L	NATIVE	SUSCLK	N/A
GP63	STBY	L	NATIVE	GPIO63	N/A
GP64	MAIN	L	NATIVE	CLKOUTFLEX0	N/A
GP65	MAIN	L	NATIVE	CLKOUTFLEX1	N/A
GP66	MAIN	L	NATIVE	CLKOUTFLEX2	N/A
GP67	MAIN	L	NATIVE	CLKOUTFLEX3	N/A
GP72	STBY	H-Z	NATIVE	VCORE_OV4	P/U 8.2K 3VDUAL
GP73	STBY		NATIVE	1_05V_OV1	P/U 8.2K 3VDUAL
GP74	STBY	H-Z	NATIVE	1_05V_OV2	P/U 8.2K 3VDUAL
GP75	STBY	H-Z	NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL

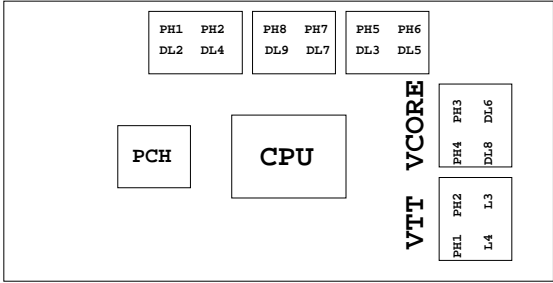
Super I/O ITE8720 GPIO Table

PIN NAME	USAGE	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KRST	
SO/GP50	-ICH_SPI_CS	
IRTX/GP47/CE2_N/JP7	CEB_N	
GP46/IRRX	-LAN2_DSM	
PSION#/GP42	-PSON	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	-PCIE_RST	
RSMRST#CIRRX1/GP55	-RSMRST	
PME#/GP54	-LPCPME	
PD5/GP75/BUSS00	N/A	

PIN NAME	USAGE	NOTE
FAN_TAC2/GP52	FANIO2	
FAN_TAC3/GP37	FANIO3	
VIDO3/FAN_TAC4/GP25/DSR2#	FANIO4	
FAN_CTL2/GP51	FANPWM2	
FAN_CTL3/GP36	FANPWM3	
VID4/GP34	BEEP-	
VID3/GP33	TURBO1	
VID2/GP32	TURBO0	
VCORE_GOOD/VID6/GP63	CPUT_LED1_C	
VID5/GP35	CPUT_LED2_C	
VID1/GP31	CPUT_LED3_C	
VID0/GP30	-LAN1_DSM	NBT_LED1_C
SLCT/GP80	CPU_LED1_C	
PE/GP81	CPU_LED2_C	
BUSY/GP82	CPU_LED3_C	
PD3/GP73/BUSS11	SB_LED1_C	
PD4/GP74/BUSS12	SB_LED2_C	
VCORE_EN/VID7/GP64	IT_GP64	SB_LED3_C
PD0/GP70	NB_LED1_C	
PD1/GP71	NB_LED2_C	
PD2/GP72/BUSS10	NB_LED3_C	
GP22/SEN	LOW_PWR_1	
VID05/GP27/SEN2	LOW_PWR_2	
PCIRST2#/GP11	-PFMRST1	
PCIRST1#/GP12	-PFMRST2	
3VSB5W#/GP40	CSI_F0	BSEL166_1
SUSCH#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CsisBSL	
VID00/GP20/CTS2#	CPUT_LED1_C	BSEL166_4
GP65/VDDA_EN/GB_01	MB_ID2	
PD6/GP76/BUSS01	MB_ID3	
PD7/GP77/BUSS02	MB_ID4	
AFD#/GP86/SMBC_R	W_PIN	FST_2X8
INIT#/GP85/SMBD_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VID01/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMBC_M	DDR_LED3_C	
PWRON#GP44	VCORE_OV1	
PANSWH#/GP43	PWRBTSW	
KDAT/GP61	-PWRBTSW	
KCLK/GP60	KDAT	
MDAT/GP57	KCLK	
MACL/GP56	MDAT	
GP66/VLDT_EN/GB_02	NBT_LED1_C	MCLK
SVD/PCIRSTIN#/CIRTX/GP15	PWM2_CR	
KDAT/GP61	PWM2_CR	
GP67/CPU_PG/GB_03	EN_LOADLINE	IT_GP67/-EN_PWM2
SLIN#/GP84/SMBD_R	-EN_PWM2	
PSI_L/FAN_CLT15/CIRRX2/GP16	-THERM	
VID04/GP26/SOUT2	DDR18V_PH2_EN	
VIDO2/FAN_TAC5/GP24/DSR2#	DDR18V_LED	
VIDO6/GP17/RI2#	1_1V_PH_EN	
VIDO7/JP6/DTR2#	JP6	
PD5/GP75/BUSS00	SB_LED3_C	



PWM各相位的擺法如下：



BIOS超電壓對應表：

線路圖名稱	BIOS選項
Vcore	CPU Vcore
CPU_VTT	CPU Termination
CPU_VAXG	CPU Graphic Core
VCC1_8_PCH	CPU PLL
VCC1_05_PCH	PCH core
3VDUAL	3VDUAL
DDR15V	DRAM voltage
DDRVTT	DRAM Terminatio
VREF_CA_AVREF_CA_B	DRAM Address Ref
VREF_DQ_AVREF_DQ_B	DRAM Data Ref

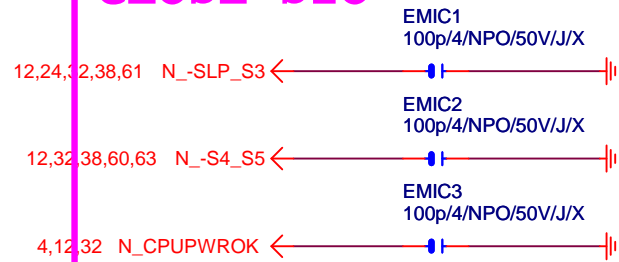
散熱模組料號：

8IBP：
1.12SP2-01A001-Y1R/Y2R
2.12SP2-01A001-Z1R/Z2R
(HIBRID模組)包材階

	3 pin FAN control	4 pin FAN control	FAN speed	Controller
CPU FAN	FANPWM1	FANPWM3	FANIO1	IT8720
	ICH_FAN_PWM2	ICH_FAN_PWM0	ICH_FAN_TACH0	PCH
SYS FAN	FANPWM2	N/A	FANIO2	IT8720
	ICH_FAN_PWM1	N/A	ICH_FAN_TACH1	PCH
PWR FAN	N/A	N/A	FANIO3	IT8720
			ICH_FAN_TACH2	PCH

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